

=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:27:40 ON 06 MAR 2006  
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STRUCTURE FILE UPDATES: 5 MAR 2006 HIGHEST RN 875875-45-9  
DICTIONARY FILE UPDATES: 5 MAR 2006 HIGHEST RN 875875-45-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when  
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\*\*\*\*\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
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experimental property data in the original document. For information  
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<http://www.cas.org/ONLINE/UG/regprops.html>

=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:27:45 ON 06 MAR 2006  
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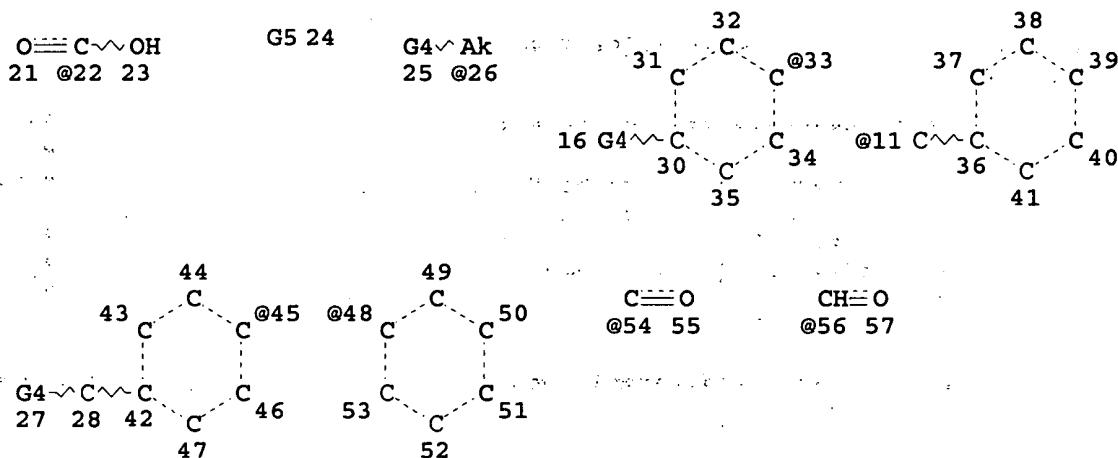
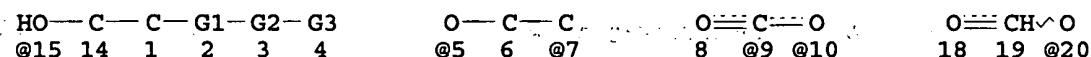
FILE COVERS 1907 - 6 Mar 2006 VOL 144 ISS 11  
FILE LAST UPDATED: 5 Mar 2006 (20060305/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L6 SCR 2043  
 L7 SCR 1839  
 L8 SCR 1992  
 L9 SCR 1918 OR 2016  
 L10 SCR 2004 OR 2021  
 L11 SCR 2026  
 L12 STR



REP G1=(0-2) 5-1 7-3  
 VAR G2=O/S/9-2 10-4/10-2 9-4/54

VAR G3=11/48/AK

VAR G4=OH/SH/20/22/56

VAR G5=15/45/33/26

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 53

STEREO ATTRIBUTES: NONE

L13 SCR 1958 OR 1985 OR 1938

L14 393451 SEA FILE=REGISTRY SSS FUL L12 AND L10 NOT (L6 OR L7 OR L8 OR L9 OR L11 OR L13)

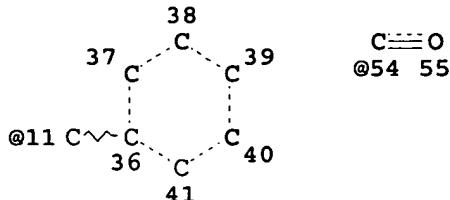
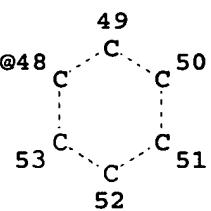
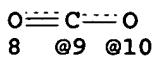
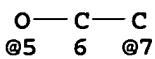
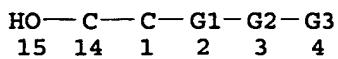
L24 ( 367) SEA FILE=REGISTRY ABB=ON C10H22O3/MF

L25 ( 12) SEA FILE=REGISTRY ABB=ON L24 AND ETHER AND OL

L26 ( 6) SEA FILE=REGISTRY ABB=ON L25 AND BUTYL

L27 ( 3) SEA FILE=REGISTRY ABB=ON L26 AND (ETHOXY(W)ETHOXY OR 2(W)ETHYL  
 )

L53 STR



REP G1=(0-2) 5-1 7-3  
 VAR G2=O/S/9-2 10-4/10-2 9-4/54  
 VAR G3=11/48/AK  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 27

STEREO ATTRIBUTES: NONE

L55 56554 SEA FILE=REGISTRY SUB=L14 SSS FUL L53  
 L56 166452 SEA FILE=HCAPLUS ABB=ON L55  
 L57 33896 SEA FILE=HCAPLUS ABB=ON L56 AND (CLEAN? OR TREAT? OR WASH?)  
 L58 1 SEA FILE=REGISTRY ABB=ON CARBON DIOXIDE/CN  
 L59 1125 SEA FILE=HCAPLUS ABB=ON L57 AND (CO2 OR CARBON DIOXIDE OR L58)  
 L63 3 SEA FILE=HCAPLUS ABB=ON L59 AND PRESSUR? (3A) SOLVENT?  
 L65 129 SEA FILE=HCAPLUS ABB=ON L59 AND PRESSUR?  
 L66 8 SEA FILE=HCAPLUS ABB=ON L65 AND DETERG?/SC, SX  
 L67 44 SEA FILE=HCAPLUS ABB=ON L57 AND PRESSUR? (3A) SOLVENT?  
 L68 1790 SEA FILE=HCAPLUS ABB=ON L57 AND (FABRIC# OR TEXTILE? OR CARPET? OR WOOL? OR COTTON? OR CLOTH? OR GARMENT? OR UPHOLSTER? OR DRAPES OR CURTAIN? OR FURNITURE?)  
 L69 98 SEA FILE=HCAPLUS ABB=ON L68 AND PRESSUR?  
 L70 3 SEA FILE=HCAPLUS ABB=ON L68 AND PRESSUR? (3A) SOLVENT?  
 L71 12 SEA FILE=HCAPLUS ABB=ON L69 AND DETERG?/SC, SX  
 L72 56 SEA FILE=HCAPLUS ABB=ON L63 OR L66 OR L67 OR L70 OR L71  
 L78 3 SEA FILE=REGISTRY ABB=ON L26 NOT L27 - *RN'S from original search*  
 L79 540 SEA FILE=HCAPLUS ABB=ON L78  
 L80 244 SEA FILE=HCAPLUS ABB=ON L79 AND (CLEAN? OR TREAT? OR WASH?)  
 L81 48 SEA FILE=HCAPLUS ABB=ON L80 AND (FABRIC# OR TEXTILE? OR CARPET? OR WOOL? OR COTTON? OR CLOTH? OR GARMENT? OR UPHOLSTER? OR DRAPES OR CURTAIN? OR FURNITURE?)  
 L82 56 SEA FILE=HCAPLUS ABB=ON (L72 OR L81) NOT L81  
 L83 46 SEA FILE=HCAPLUS ABB=ON L82 AND (1840-2000)/PRY, AY, PY

=> D L83 BIB ABS HITIND HITSTR 1-46

*56, 554 structures  
Covering Claim 2*

*limited by date*

L83 ANSWER 1 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:1004032 HCAPLUS

DN 140:6435

TI Cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent

IN Damaso, Gene R.; Schulte, James E.; Racette, Timothy L.

PA R. R. Street &amp; Co., Inc., USA

SO U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. Ser. No. 419,345.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

applicant

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002011258	A1	20020131	US 2001-837849	20010418 <--
	US 6755871	B2	20040629		
	CA 2388500	AA	20010426	CA 2000-2388500	20001013 <--
	CA 2388500	C	20040330		
	CA 2388913	AA	20010426	CA 2000-2388913	20001013 <--
	CA 2388913	C	20040413		
	WO 2001029305	A1	20010426	WO 2000-US28432	20001013 <--
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	WO 2001029306	A1	20010426	WO 2000-US28433	20001013 <--
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	BR 2000014772	A	20030610	BR 2000-14772	20001013 <--
	NZ 518788	A	20030926	NZ 2000-518788	20001013 <--
	JP 2004515560	T2	20040527	JP 2001-532281	20001013 <--
	AU 777996	B2	20041111	AU 2000-80218	20001013 <--
	NZ 526305	A	20050324	NZ 2000-526305	20001013 <--
	US 2002010965	A1	20020131	US 2001-843103	20010425 <--
	US 6558432	B2	20030506		
	US 2002100124	A1	20020801	US 2002-57068	20020125 <--
	US 6736859	B2	20040518		
	NO 2002001764	A	20020614	NO 2002-1764	20020415 <--
	NO 2002001765	A	20020617	NO 2002-1765	20020415 <--
	CA 2444807	AA	20021031	CA 2002-2444807	20020418
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 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2002086223 A1 20021031 WO 2002-US12304 20020418

WO 2002086223 B1 20021219

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
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 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
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 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
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EP 1381728 A1 20040121 EP 2002-736584 20020418

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

EP 1383951 A1 20040128 EP 2002-725726 20020418

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

NZ 529724 A 20050128 NZ 2002-529724 20020418

BR 2002009201 A 20050222 BR 2002-9201 20020418

US 2003220219 A1 20031127 US 2003-427426 20030430

US 2004168262 A1 20040902 US 2004-797516 20040310 <--

US 2004173246 A1 20040909 US 2004-804338 20040318 <--

PRAI US 1999-419345 A2 19991015 <--

US 2000-686773 A 20001011 <--

WO 2000-US28432 W 20001013 <--

WO 2000-US28433 W 20001013 <--

US 2001-837849 A 20010418

US 2001-843103 A 20010425

US 2002-57068 A1 20020125

WO 2002-US12239 W 20020418

WO 2002-US12304 W 20020418

AB A cleaning system that utilizes an organic cleaning solvent and pressurized fluid solvent is disclosed. The system has no conventional evaporative hot air drying cycle. Instead, the system utilizes the solubility of the organic solvent in pressurized fluid solvent as well as the phys. properties of pressurized fluid solvent. After an organic solvent cleaning cycle, the solvent is extracted from the textiles at high speed in a rotating drum in the same way conventional solvents are extracted from textiles in conventional evaporative hot air dry cleaning machines. Instead of proceeding to a conventional drying cycle, the extracted textiles are then immersed in pressurized fluid solvent to extract the residual organic solvent from the textiles. This is possible because the organic solvent is soluble in pressurized fluid solvent. After the textiles are immersed in pressurized fluid solvent, pressurized fluid solvent is pumped from the drum. Finally, the drum is de-pressurized to atmospheric pressure to evaporate any remaining pressurized fluid solvent, yielding clean, solvent free textiles. The organic solvent is preferably selected from terpenes, halohydrocarbons, certain glycol ethers, polyols, ethers, esters of glycol ethers, esters of fatty acids and other long chain carboxylic acids, fatty alcs. and other long-chain alcs., short-chain alcs., polar aprotic solvents, siloxanes, hydrofluoroethers, dibasic esters, and aliphatic hydrocarbons solvents or similar solvents or mixts. of

such solvents and the pressurized fluid solvent is preferably densified carbon dioxide

IC ICM B08B003-04  
ICS D06F001-00  
INCL 134026000; 134088000; 134028000; 134032000; 134033000; 134034000;  
134036000; 134042000; 008142000; 043002000  
CC 46-6 (Surface Active Agents and Detergents)  
ST org solvent cleaning compn  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(bromo, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(chloro, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Cleaning  
(cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Terpenes, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(cyclic, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Carboxylic acids, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(dicarboxylic, esters, solvent; cleaning system utilizing an  
organic cleaning solvent and a pressurized  
fluid solvent)  
IT Carboxylic acids, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(esters, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Glycols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(ethers, esters, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Glycols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(ethers, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Alcohols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(fatty, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(fluoro, solvent; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Ethers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(fluoroalkyl, solvent; cleaning system utilizing an organic

cleaning solvent and a pressurized fluid solvent)

IT Ethers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(glycol, esters, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Ethers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(glycol, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(halo, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Solvents  
(organic; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Essential oils  
RL: NUU (Other use, unclassified); USES (Uses)  
(pine, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Alcohols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(polyhydric, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Alcohols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(short-chain, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Ethers, uses  
Hydrocarbons, uses  
Isoalkanes  
Ketones, uses  
Polysiloxanes, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Fatty acids, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(soya, Me esters, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Cyclic compounds  
RL: NUU (Other use, unclassified); USES (Uses)  
(terpenes, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 124-38-9, Carbon dioxide, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(densified, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 67-68-5, Dimethyl sulfoxide, uses 68-12-2, Dimethylformamide, uses 76-13-1, 1,1,2-Trichlorotrifluoroethane 80-56-8,  $\alpha$ -Pinene

104-76-7, 2-Ethylhexanol 106-94-5, n-Propyl bromide 107-41-5, Hexylene glycol 108-32-7, Propylene carbonate 111-55-7, Ethylene glycol diacetate 112-17-4, Decyl acetate 143-24-8, Tetraethylene glycol dimethyl ether 355-42-0, Perfluorohexane 541-02-6, Decamethylcyclopenta-siloxane 1072-33-9, Tridecyl acetate 1119-40-0, Dimethyl glutarate 5274-66-8, Triethylene glycol monooleyl ether 5989-27-5 9004-78-8, Ethylan HB4 163702-07-6, 1-Methoxynonafluorobutane

RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 124-38-9, Carbon dioxide, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(densified, solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

RN 124-38-9 HCAPLUS

CN Carbon dioxide (8CI, 9CI) (CA INDEX NAME)

O=C=O

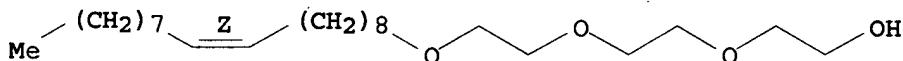
IT 5274-66-8, Triethylene glycol monooleyl ether

RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

RN 5274-66-8 HCAPLUS

CN Ethanol, 2-[2-[2-[(9Z)-9-octadecenyl]ethoxy]ethoxy] - (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 2 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:833041 HCAPLUS

DN 137:339322

TI Cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent

IN Damaso, Gene R.; Schulte, James E.; Racette, Timothy L.

PA USA

SO PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002086223	A1	20021031	WO 2002-US12304	20020418
	WO 2002086223	B1	20021219		

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*applicant*

PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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US 6755871	B2	20040629		
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EP 1381728	A1	20040121	EP 2002-736584	20020418
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
EP 1383951	A1	20040128	EP 2002-725726	20020418
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
NZ 529724	A	20050128	NZ 2002-529724	20020418
BR 2002009201	A	20050222	BR 2002-9201	20020418
US 2003220219	A1	20031127	US 2003-427426	20030430
PRAI US 2001-837849	A	20010418		
US 1999-419345	A2	19991015	<--	
US 2000-686773	A	20001011	<--	
US 2001-843103	A	20010425		
WO 2002-US12239	W	20020418		
WO 2002-US12304	W	20020418		

AB A cleaning system utilizes an organic cleaning solvent and pressurized fluid solvent wherein the solubility of the organic solvent in pressurized fluid solvent as well as the phys. properties of pressurized fluid solvent allow the removal of the organic solvent from the textile without using conventional evaporative hot air drying cycle. After an organic solvent cleaning cycle, the solvent is extracted from the textiles at high speed in a rotating drum in the same way conventional solvents are extracted from textiles in conventional evaporative hot air dry cleaning machines. Instead of proceeding to a conventional drying cycle, the extracted textiles are then immersed in pressurized fluid solvent to extract the residual organic solvent from the textiles. After the textiles are immersed in pressurized fluid solvent, pressurized fluid solvent is pumped from the drum. Finally, the drum is de-pressurized to atmospheric pressure to evaporate any remaining pressurized fluid solvent, yielding clean, solvent free textiles. The organic solvent is preferably selected from terpenes, halohydrocarbons, certain glycol ethers, polyols, ethers, esters of glycol ethers, esters of fatty acids and other long chain carboxylic acids, fatty alcs. and other long-chain alcs., short-chain alcs., polar aprotic solvents, siloxanes, hydrofluoroethers, dibasic esters, and aliphatic hydrocarbons solvents or similar solvents or mixts. of such solvents and the pressurized fluid solvent is preferably densified carbon dioxide.

IC ICM D06L001-02  
CC 46-5 (Surface Active Agents and Detergents)  
ST dry clean solvent terpene halohydrocarbon glycol ether;  
densified carbon dioxide dry clean  
pressurized fluid solvent  
IT Solvents  
(aprotic; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(bromo; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(chloro; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Dry cleaning solvents  
(cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Hydrocarbons, uses  
Ketones, uses  
Siloxanes (nonpolymeric)  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Terpenes, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(cyclic; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Carboxylic acids, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(esters, mono- or di-basic; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Glycols, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(ethers, optionally esters; cleaning system utilizing an organic  
cleaning solvent and a pressurized fluid  
solvent)  
IT Alcohols, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(fatty; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Hydrocarbons, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(fluoro; cleaning system utilizing an organic cleaning  
solvent and a pressurized fluid solvent)  
IT Ethers, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(glycol, optionally esters; cleaning system utilizing an organic

cleaning solvent and a pressurized fluid solvent)

IT Hydrocarbons, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(halo; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Terpenes, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(isomers; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Ethers, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(optionally hydrofluoro; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Essential oils

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(pine; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Alcohols, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(polyhydric; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Alcohols, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(short-chain; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT Cyclic compounds

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(terpenes; cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 57-55-6D, Monopropylene glycol, ether 80-56-8D,  $\alpha$ -Pinene, isomers

107-21-1D, Monoethylene glycol, ether derivative 111-46-6D,

Diethylene glycol, ether derivative 112-27-6D, Triethylene glycol,

ether 5989-27-5 24800-44-0D, Tripropylene glycol, ether

25265-71-8D, Dipropylene glycol, ether

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)

(cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 124-38-9, Carbon dioxide, uses

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
(densified, pressurized fluid solvent;  
cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

IT 111-46-6D, Diethylene glycol, ether derivative 112-27-6D,

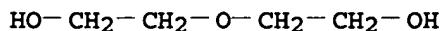
Triethylene glycol, ether 24800-44-0D, Tripropylene glycol,

ether 25265-71-8D, Dipropylene glycol, ether

RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)

(cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

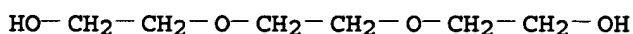
RN 111-46-6 HCAPLUS  
 CN Ethanol, 2,2'-oxybis- (9CI) (CA INDEX NAME)



RN 112-27-6 HCAPLUS  
 CN Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis- (9CI) (CA INDEX NAME)

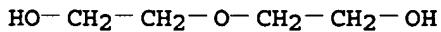


RN 24800-44-0 HCAPLUS  
 CN Propanol, [(1-methyl-1,2-ethanediyl)bis(oxy)]bis- (9CI) (CA INDEX NAME)



3 (D1-Me)

RN 25265-71-8 HCAPLUS  
 CN Propanol, oxybis- (9CI) (CA INDEX NAME)



2 (D1-Me)

IT 124-38-9, Carbon dioxide, uses  
 RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)  
 (densified, pressurized fluid solvent;  
 cleaning system utilizing an organic cleaning solvent and a pressurized fluid solvent)

RN 124-38-9 HCAPLUS  
 CN Carbon dioxide (8CI, 9CI) (CA INDEX NAME)



RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 3 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2001:713508 HCAPLUS  
 DN 135:258890  
 TI Aqueous acidic metal cleaning composition with controlled ph  
 IN Scriven, Herman; Baker, Robert; Corey, Garland  
 PA BBJ Environmental Solutions Inc., USA

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001070922	A1	20010927	WO 2001-US8794	20010320 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 6465404	B2	20021015	US 2001-811582	20010320 <--
	US 2000-190935P	P	20000321 <--		
AB	Aqueous acidic metal <b>cleaning</b> compns. with controlled pH especially useful in the <b>cleaning</b> of metals and combinations of metals and nonmetals with minimal corrosion effect, particular on aluminum, comprises at least one nitrogen containing compound to provide a stabilized pH; a terpene emulsifier, a nonionic surfactant and optionally at least one water soluble solvent having a vapor pressure of less than 4 mm Hg at 20 °C.				
IC	ICM C11D003-02				
	ICS C11D003-18; C11D001-72; C23G001-02				
CC	46-6 (Surface Active Agents and Detergents)				
ST	acidic metal <b>cleaning</b> compn pH control				
IT	Onium compounds				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(1-(carboxymethyl)-4,5-dihydro-1-(2-hydroxyethyl)-2-norcoco alkyl imidazolium, hydroxides, sodium salts; aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Fluorides, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(Ammonium derivs.; aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Amides, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(N-(hydroxyalkyl); aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Emulsifying agents				
	(Terpene or d-Limonene; aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Alcohols, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(amino, optionally salt derivs.; aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Corrosion inhibitors				
	Detergents				
	(aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Lactones				
	RL: NUU (Other use, unclassified); USES (Uses)				
	(aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Alkali metal fluorides				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(aqueous acidic metal <b>cleaning</b> composition with controlled ph)				
IT	Cleaning				

(chemical; aqueous acidic metal cleaning composition with controlled ph)

IT Amides, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coco, Modified; aqueous acidic metal cleaning composition with controlled ph)

IT Glycols, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (ethers; aqueous acidic metal cleaning composition with controlled ph)

IT Alcohols, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (ethoxylated; aqueous acidic metal cleaning composition with controlled ph)

IT Silicates, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fluoro-, Sodium derivs.; aqueous acidic metal cleaning composition with controlled ph)

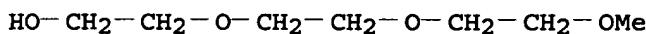
IT Ethers, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (glycol; aqueous acidic metal cleaning composition with controlled ph)

IT 616-45-5D, Pyrrolidone, derivs.  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (aqueous acidic metal cleaning composition with controlled ph)

IT 60-00-4, EDTA, uses 102-71-6, Triethanolamine, uses 111-42-2D,  
 Diethanolamine, optionally coconut derivs. 139-13-9D, NTA, optionally  
 salts 1333-83-1, Sodium bifluoride 1341-49-7, Ammonium bifluoride  
 7789-29-9, Potassium bifluoride 7789-74-4D, Calcium fluorophosphate,  
 derivs. 9016-45-9, Nonyl phenol ethoxylate 16545-54-3  
 25498-49-1, Tripropylene glycol methyl ether 28299-33-4D,  
 Imidazoline, Modified derivs.  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (aqueous acidic metal cleaning composition with controlled ph)

IT 25498-49-1, Tripropylene glycol methyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (aqueous acidic metal cleaning composition with controlled ph)

RN 25498-49-1 HCPLUS  
 CN Propanol, [2-(2-methoxymethylethoxy)methylethoxy]- (9CI) (CA INDEX NAME)



3 ( D1-Me )

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 4 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 2001:427379 HCPLUS  
 DN 135:34641  
 TI Low odor, nonaerosol hard surface cleaner with enhanced soil removal  
 IN Robbins, Michael H.; Julian, Jennifer C.; Thompson, Suzanne M.; Robinson, Gary L.; Choy, Clement K.; Gossett, Elizabeth A.  
 PA The Clorox Company, USA  
 SO U.S., 7 pp., Cont.-in-part of U.S. 5,972,876.  
 CODEN: USXXAM  
 DT Patent  
 LA English

## FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6245728	B1	20010612	US 1999-427175	19991025 <--
	US 5972876	A	19991026	US 1996-731653	19961017 <--
	KR 2000049238	A	20000725	KR 1999-703342	19990416 <--
	US 6214784	B1	20010410	US 1999-427156	19991025 <--
	WO 2001030950	A1	20010503	WO 2000-US28404	20001013 <--
	W: AU, BR, CA, CN, JP, KR, MX RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 2001049347	A1	20011206	US 2001-861049	20010518 <--
	US 6399555	B2	20020604		
PRAI	US 1996-731653	A2	19961017 <--		
	US 1999-427175	A	19991025 <--		
AB	An aqueous hard surface cleaner with improved soil removal contains (a) either an anionic, nonionic, amphoteric surfactant, and mixts., optionally, a quaternary ammonium surfactant, 0.001-25, (b) ≥1 water-soluble or dispersible organic solvent having a vapor pressure ≥0.001 mm Hg at 25°, 0.1-50, (c) a combination of (i) an incompletely neutralized K ethylenediamine-tetraacetate (EDTA) 0.5-15 and (ii) a precipitating K co-builder as chelating agents (e.g. K <sub>2</sub> CO <sub>3</sub> ) 0.1-15%, at i/ii ratio 1-10:1 and (d) the remainder, H <sub>2</sub> O.				
IC	ICM C11D001-29				
	ICS C11D001-72; C11D003-30; C11D003-43				
INCL	510238000				
CC	46-6 (Surface Active Agents and Detergents)				
ST	potassium EDTA chelating agent cleaning compn; surfactant chelating agent cleaning compn; soap scum removal bathroom cleaning compn				
IT	Amine oxides RL: TEM (Technical or engineered material use); USES (Uses) (C12; low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	Surfactants (amphoteric; low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	Surfactants (anionic; low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	Detergents (low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	Quaternary ammonium compounds, uses RL: TEM (Technical or engineered material use); USES (Uses) (low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	Surfactants (nonionic; low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	583-52-8, Potassium oxalate K <sub>2</sub> C <sub>2</sub> O <sub>4</sub> 584-08-7, Potassium carbonate K <sub>2</sub> CO <sub>3</sub> RL: TEM (Technical or engineered material use); USES (Uses) (co-builder; low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	5964-35-2 17572-97-3 RL: MOA (Modifier or additive use); USES (Uses) (low odor, nonaerosol hard surface cleaner with enhanced soil removal)				
IT	112-34-5, Butyl carbitol 9002-93-1 9016-45-9, Polyethylene				

glycol nonylphenol ether 55963-06-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(low odor, nonaerosol hard surface cleaner with enhanced soil removal)

IT 112-34-5, Butyl carbitol

RL: TEM (Technical or engineered material use); USES (Uses)  
(low odor, nonaerosol hard surface cleaner with enhanced soil removal)

RN 112-34-5 HCPLUS

CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OHRE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 5 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2001:349174 HCPLUS

DN 134:341701

TI Floor polishing and cleaning agent with fast drying speed

IN Nagai, Satoshi; Yamada, Hiroyuki; Hayakawa, Toshiharu

PA Kao Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001131495	A2	20010515	JP 1999-251633	19990906 <--
PRAI	JP 1999-239595	A	19990826 <--		

AB Title polishing and cleaning agent comprises (A) acrylic resins and (B) glycol-type solvents, having vapor pressure (VP)  $\leq$  200 Pa at 20°, represented by the formula of RO(C<sub>2</sub>H<sub>4</sub>O)<sub>x</sub>(C<sub>3</sub>H<sub>6</sub>O)<sub>y</sub>R' [R, R': H (except R = R'), C<sub>1</sub>-7 alkyl; 0  $\leq$  average x  $\leq$  5 and 0  $\leq$  average y  $\leq$  3 (except x=y=0)], wherein the content of B is 0.5-3.0 wt% and non-volatile content 3-8 wt%. Thus, a composition comprising Primal NT 2624 13.2, diethylene glycol monoethyl ether (VP = 17 Pa at 20°) 1.5 parts, and other additives, showed drying speed 3.0 min and glossiness enhancement 12.

IC ICM C09G001-16

ICS C08L033-20; C09D005-00; C09D133-00

CC 42-11 (Coatings, Inks, and Related Products)

IT Glycols, uses

RL: NUU (Other use, unclassified); USES (Uses)

(ethers; preparation of floor polishing and cleaning agent with fast drying speed)

IT Ethers, uses

RL: NUU (Other use, unclassified); USES (Uses)

(glycol; preparation of floor polishing and cleaning agent with fast drying speed)

IT Floors

Polishing materials

Solvents

(preparation of floor polishing and cleaning agent with fast drying speed)

IT Acrylic polymers, uses

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

engineered material use); USES (Uses)  
 (preparation of floor polishing and cleaning agent with fast  
 drying speed)

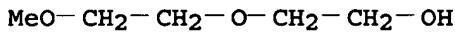
IT 111-77-3, Diethylene glycol monomethyl ether 111-90-0,  
 Diethylene glycol monoethyl ether  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (preparation of floor polishing and cleaning agent with fast  
 drying speed)

IT 33058-70-7, Butyl methacrylate-ethyl acrylate-methacrylic acid-styrene  
 copolymer 168754-93-6, Primal NT 2624  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
 engineered material use); USES (Uses)  
 (preparation of floor polishing and cleaning agent with fast  
 drying speed)

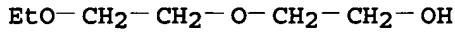
IT 111-77-3, Diethylene glycol monomethyl ether 111-90-0,  
 Diethylene glycol monoethyl ether  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (preparation of floor polishing and cleaning agent with fast  
 drying speed)

RN 111-77-3 HCAPLUS

CN Ethanol, 2-(2-methoxyethoxy)- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 111-90-0 HCAPLUS  
 CN Ethanol, 2-(2-ethoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



L83 ANSWER 6 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2001:320181 HCAPLUS  
 DN 134:328256  
 TI Low odor, hard surface abrasive cleaner with enhanced soil  
 removal  
 IN Peterson, David; Robbins, Michael H.; Ochromogo, Maria G.; Deleo, Malcolm  
 A.; Selbach, Hanneliese S.  
 PA Clorox Co., USA  
 SO PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001031110	A1	20010503	WO 2000-US28372	20001013 <--
	W: AU, BR, CA, CN, JP, KR, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRAI WO 2000-US28372 20001013 <--

AB An aqueous, hard surface abrasive cleaner comprises (a) either an  
 anionic, nonionic, amphoteric surfactant, and mixts. thereof with  
 optionally, a quaternary ammonium surfactant; (b) at least one water-soluble  
 or dispersible organic solvent having a vapor pressure of  
 at least 0.001 mmHg at 25°; (c) Tetrapotassium  
 ethylenediaminetetraacetate (K4EDTA) or tripotassium

ethylenediaminetetraacetate (K3EDTA) as a chelating agent; (d) an abrasive; and (e) the remainder, water.

IC D06L003-00; D06L003-06

CC 46-6 (Surface Active Agents and Detergents)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(C11-12, ethoxylated; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Amine oxides

RL: TEM (Technical or engineered material use); USES (Uses)  
(C12, surfactant; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Amine oxides

RL: TEM (Technical or engineered material use); USES (Uses)  
(C12-16-alkyldimethyl; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Surfactants

(amphoteric; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Surfactants

(anionic; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(block, nonionic surfactant; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(crosslinked; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Detergents

(low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Pumice

Quaternary ammonium compounds, uses

Zeolite 4A

RL: TEM (Technical or engineered material use); USES (Uses)  
(low odor, hard surface abrasive cleaner with enhanced soil removal)

IT Surfactants

(nonionic; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT 9004-62-0, Cellosize

RL: TEM (Technical or engineered material use); USES (Uses)  
(Cellosize QR 4400H; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT 9002-88-4, Polyethylene

RL: TEM (Technical or engineered material use); USES (Uses)  
(abrasive; low odor, hard surface abrasive cleaner with enhanced soil removal)

IT 67-63-0, Isopropanol, uses 112-34-5, Butyl Carbitol 471-34-1, Calcium carbonate, uses 5964-35-2, Tetrapotassium ethylenediaminetetraacetate 5989-27-5 7631-86-9, Silica, uses 9004-82-4, Calfoam ES 302 11138-66-2, Xanthan gum 13463-67-7, Titania, uses 14807-96-6, Talc, uses 17572-97-3 25155-30-0, Bio-Soft 40S 35884-42-5, Dipropylene glycol butyl ether 106392-12-5, Pluronic P 104 192827-78-4, Carbopol 674 336796-86-2, Barquat 4250Z

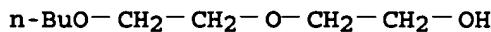
RL: TEM (Technical or engineered material use); USES (Uses)  
(low odor, hard surface abrasive cleaner with enhanced soil removal)

IT 112-34-5, Butyl Carbitol 35884-42-5, Dipropylene glycol butyl ether

RL: TEM (Technical or engineered material use); USES (Uses)  
(low odor, hard surface abrasive cleaner with enhanced soil removal)

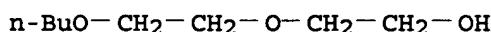
RN 112-34-5 HCPLUS

CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



RN 35884-42-5 HCPLUS

CN Propanol, 1(or 2)-(2-butoxymethylethoxy)- (9CI) (CA INDEX NAME)



2 (D1-Me)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 7 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 2001:320047 HCPLUS

DN 134:328252

TI Improved low odor, hard surface cleaner with enhanced soil removal

IN Robbins, Michael H.; Julian, Jennifer C.; Thompson, Suzanne M.; Robinson, Gary L.; Choy, Clement K.; Gossett, Elizabeth A.

PA Clorox Co., USA

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2001030950 A1 20010503 WO 2000-US28404 20001013 <--  
W: AU, BR, CA, CN, JP, KR, MX  
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE

US 6245728 B1 20010612 US 1999-427175 19991025 <--  
PRAI US 1999-427175 A 19991025 <--  
US 1996-731653 A2 19961017 <--

AB An aqueous hard surface cleaner with improved soil removal comprises (a) either an anionic, nonionic, amphoteric surfactant, and mixts. thereof with optionally, a quaternary ammonium surfactant, the total amount of the surfactants being present in a cleaning effective amount; (b) at least one water-soluble or dispersible organic solvent having a vapor pressure of at least 0.001 mm Hg at 25°; (c) a combination of (i) an incompletely neutralized potassium ethylenediaminetetraacetate (EDTA) and (ii) a precipitating co-builder as chelating agent; and (d) the remainder, water.

IC ICM C11D001-72

ICS C11D001-86; C11D001-94; C11D003-26; C11D003-43

CC 46-6 (Surface Active Agents and Detergents)

IT Amine oxides  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (C12; improved low odor, hard surface **cleaner** with enhanced  
 soil removal)

IT Surfactants  
 (amphoteric; improved low odor, hard surface **cleaner** with  
 enhanced soil removal)

IT Surfactants  
 (anionic; improved low odor, hard surface **cleaner** with  
 enhanced soil removal)

IT Detergents  
 (improved low odor, hard surface **cleaner** with enhanced soil  
 removal)

IT Quaternary ammonium compounds, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (improved low odor, hard surface **cleaner** with enhanced soil  
 removal)

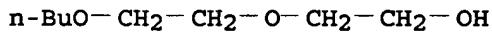
IT Surfactants  
 (nonionic; improved low odor, hard surface **cleaner** with  
 enhanced soil removal)

IT 5964-35-2 17572-97-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (improved low odor, hard surface **cleaner** with enhanced soil  
 removal)

IT 112-34-5, Butyl carbitol 55963-06-9, BTC 2125  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (improved low odor, hard surface **cleaner** with enhanced soil  
 removal)

IT 112-34-5, Butyl carbitol  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (improved low odor, hard surface **cleaner** with enhanced soil  
 removal)

RN 112-34-5 HCAPLUS  
 CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 8 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2000:818602 HCAPLUS  
 DN 134:102557  
 TI Silicone Antifoam Performance: Correlation with Spreading and Surfactant Monolayer Packing  
 AU Jha, B. K.; Christiano, S. P.; Shah, D. O.  
 CS Center for Surface Science Engineering Departments of Chemical Engineering  
 and Anesthesiology, University of Florida, Gainesville, FL, 32611, USA  
 SO Langmuir (2000), 16(26), 9947-9954  
 CODEN: LANGD5; ISSN: 0743-7463  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The relation between the spreading of antifoam oils and their performance  
 is much discussed in the literature, but a demonstrated connection between  
 antifoam spreading and performance was lacking. This paper reports the  
 performance of a poly(dimethylsiloxane) (PDMS)-based antifoam on foam  
 produced by 12 surfactant solns. These include single or mixed surfactant

systems, including impure surfactant mixts. to model fabric washing detergents. The oil film spreading pressure,  $\pi_{o/w}$ , is presented as a simple and relevant measurement of the thermodyn. of antifoam oil spreading. Antifoaming efficacy was measured as the relative reduction in the initial foam height,  $\Delta H_{rel}$ , using cylinder shake tests at a fixed antifoam dosage.  $\Delta H_{rel}$  increases with  $\pi_{o/w}$ , demonstrating a strong statistical correlation between antifoam oil spreading and its performance. Antifoam effectiveness varies with surfactant concentration, surfactant type, and surfactant hydrophobe size and also with increased d. of surfactant packing. Surface shear viscosity,  $\mu_s$ , was used to quantify surfactant packing. Antifoam effectiveness decreases with increasing surface shear viscosity. This finding provides a potentially useful link between antifoam efficacy and surfactant selection based on well-established surfactant mol. packing parameters. The role of spreading of antifoam oil at the air/surfactant solution interface is studied. Oil film spreading pressure decreases by a power law function with increasing surface shear viscosity of the surfactant film. A new fluorescence technique was used to measure the extent of PDMS spreading. Initial results suggest a correlation between the spreading distance and antifoaming performance. An antifoam mechanism is proposed that features antifoam spreading as a direct contributor to bubble film rupture and incorporates surfactant type and concentration, surfactant packing d., and antifoam oil film spreading pressure as factors contributing to antifoam efficacy.

CC 46-5 (Surface Active Agents and Detergents)  
 IT 57-09-0, n-Hexadecyltrimethylammonium bromide 112-53-8, 1-Dodecanol 151-21-3, SDS, properties 1119-94-4, n-Dodecyltrimethylammonium bromide 1119-97-7, n-Tetradecyltrimethylammonium bromide 2082-84-0, n-Decyltrimethylammonium bromide 2083-68-3, n-Octyltrimethylammonium bromide 3055-95-6, 3,6,9,12,15-Pentaoxaheptacosan-1-ol 9002-93-1, Triton X-100 9016-00-6, Poly(dimethylsiloxane)  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (correlation of poly(dimethylsiloxane)-based antifoam performance with spreading and surfactant monolayer packing)  
 IT 3055-95-6, 3,6,9,12,15-Pentaoxaheptacosan-1-ol  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (correlation of poly(dimethylsiloxane)-based antifoam performance with spreading and surfactant monolayer packing)  
 RN 3055-95-6 HCAPLUS  
 CN 3,6,9,12,15-Pentaoxaheptacosan-1-ol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

PAGE 1-A

$$\text{HO}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-$$

PAGE 1-B

— (CH<sub>2</sub>)<sub>11</sub>—Me

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 9 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2000:553271 HCAPLUS

DN 133:165726  
 TI Process for the production of an aerosol composition  
 IN Grit, Mustafa  
 PA Goldwell G.m.b.H., Germany  
 SO Eur. Pat. Appl., 8 pp.  
 CODEN: EPXXDW

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1026220	A1	20000809	EP 1999-124334	19991206 <-- R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI DE 1999-19903997 A 19990202 <--

AB CO<sub>2</sub>-based aerosol forming compns. comprising ≥5 weight% water, an acid (e.g., citric acid) and a solid constituent (e.g., powder or tablet) are added to a spray top-actuated pressure container, forming an aerosol by a simple process in which the solid constituent comprising an alkali metal or alkaline earth carbonate and/or bicarbonate dissolves and reacts with the acid in the closed container, releasing CO<sub>2</sub>. The acid may be added to the mixture as a powder. The process can be used for production of sprays and foams for cosmetic products as well as household cleaners.

IC ICM C09K003-30

CC 48-3 (Unit Operations and Processes)

Section cross-reference(s): 46, 62

ST aerosol compn prodn spray can; carbon dioxide aerosol prodn spray can; cosmetic foam spray aerosol prodn; cleaner-foam spray aerosol prodn

IT Aerosols

Cleaning solvents

Detergents

Foams

Propellants (sprays and foams)

Shampoos

(process for production of aerosol composition)

IT 124-38-9, Carbon dioxide, processes

RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)

(process for production of aerosol composition)

IT 63-42-3, Lactose 64-17-5, Ethanol, processes 77-92-9, Citric acid,

processes 87-69-4, Tartaric acid, processes 112-03-8,

Stearyltrimethylammonium chloride 112-85-6, Behenic acid 144-55-8,

Sodium hydrogen carbonate, processes 151-21-3, Sodium lauryl sulfate,

processes 497-19-8, Sodium carbonate, processes 584-08-7, Potassium

carbonate 622-08-2, 2-Benzylxyethanol 9004-82-4, Polyethylene

glycol lauryl ether sulfate, sodium salt 9014-92-0, Polyethylene glycol

laurylphenyl ether 26183-44-8, Polyethylene glycol lauryl ether sulfate

56090-54-1, Triglycerin 58846-77-8, Decylglucoside 97338-06-2,

Tetraethyl CO40 98984-78-2, Monosodium N-lauryl L-glutamate

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(process for production of aerosol composition)

IT 124-38-9, Carbon dioxide, processes

RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)

(process for production of aerosol composition)

RN 124-38-9 HCPLUS

CN Carbon dioxide (8CI, 9CI) (CA INDEX NAME)

O=C=O

IT 622-08-2, 2-Benzylxyethanol  
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (process for production of aerosol composition)  
 RN 622-08-2 HCAPLUS  
 CN Ethanol, 2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

HO-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-Ph

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

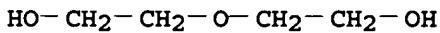
L83 ANSWER 10 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2000:302100 HCAPLUS  
 DN 132:325835  
 TI O/W emulsion containing liquid crystal-forming emulsifiers and their manufacture  
 IN Makita, Riwako; Matsubara, Masahiko; Umesawa, Hiroaki; Takayama, Kentaro  
 PA Lion Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000128733	A2	20000509	JP 1998-302408	19981023 <--
PRAI JP 1998-302408		19981023 <--		
AB The O/W emulsion, used as textile-finishing agents, cosmetics, health products, detergents, food, etc., comprises (a) oily components, (b) liquid crystal-forming emulsifiers, and (c) an aqueous phase, and shows total amts. of (a) and (b) 25-70% of the emulsion, viscosity at 25° 3-80 Pa·s, and average particle size ≤0.1 μm. The emulsion is manufactured by emulsifying a preemulsified product with a high pressure homogenizer to increase the viscosity ≥10 times. The preemulsified product may be prepared by adding polyhydric alc. into the oily phase to disperse the oily phase in the alc., adding the aqueous phase to the dispersion, and then mixing the composition to induce phase inversion. The method provides a viscous emulsion without using thickening agents such as polymers. Olive squalane 30, decaglyceryl monostearate 10, concentrated glycerin 10, propylparaben 0.6, dipropylene glycol 10, methylparaben 0.2, and H2O to 100% was made into an O/W emulsion by the method described above using a microfluidizer at 100 MPa. The high-pressure treatment increased the viscosity of a preemulsified product from 80 to 7400 mPa·s (25°). The O/W emulsion was easily dispersed when diluted with H2O. The emulsion was stored at 50° for 1 mo or at room temperature for 6 mo to show no change in the appearance.				
IC ICM A61K007-00				
ICS A61K009-107; B01F017-18; B01J013-00				
CC 62-4 (Essential Oils and Cosmetics)				
IT Section cross-reference(s): 17, 46, 63, 66				
IT 56-81-5, Glycerin, biological studies 107-21-1, Ethylene glycol, biological studies 107-88-0, 1,3-Butylene glycol 25265-71-8,				

Dipropylene glycol 79777-30-3, Decaglyceryl monostearate 102033-55-6,  
 Decaglyceryl diisostearate 133738-23-5, Decaglyceryl monoisostearate  
 148000-42-4  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (manufacture of O/W emulsion with high viscosity using liquid crystal-forming  
 emulsifiers)

IT 25265-71-8, Dipropylene glycol  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (manufacture of O/W emulsion with high viscosity using liquid crystal-forming  
 emulsifiers)

RN 25265-71-8 HCPLUS  
 CN Propanol, oxybis- (9CI) (CA INDEX NAME)



2 (D1-Me)

L83 ANSWER 11 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:795932 HCPLUS  
 DN 132:37287  
 TI Non-aqueous, liquid detergent compositions containing gasified particulate  
 matter for cleaning and bleaching of fabrics  
 IN Parry, Diane  
 PA The Procter & Gamble Company, USA  
 SO PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9964556	A1	19991216	WO 1999-IB996	19990601 <--
		W:	BR, CA, CN, IN, JP, MX, US		
		RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE		
PRAI	US 1998-88170P	P	19980605 <--		
AB	These title compns. comprise gasified particles that are solid at room temperature, highly water-soluble, and essentially insol. in the nonaq. liquid detergent compns., providing enhanced product dissoln. and aesthetics in the form of colored speckles and/or fragrances, and as an example a core substance incorporating NaHCO <sub>3</sub> and perfume. Preferably these nonaq. liquid detergent compns. addnl. comprise a peroxygen bleaching agent and an organic detergent builder, dispersed in a liquid phase preferably structured with a surfactant. An example detergent contained sodium dodecylbenzenesulfonate powder structurant 16, alc. ethoxylate surfactant 22, solvent blend 19, Na citrate dihydrate 3, bleach activator 5.9, Na <sub>2</sub> CO <sub>3</sub> 9, acrylic-maleic copolymer 3, polyethylene glycol solid containing N (g) particle 0.4, EDDS 1, cellulase 0.12, amylase 0.4, quaternary ammonium compound 1.25, Na perborate 15, thickener 0.4, suds suppressor 0.04, perfume 0.5, TiO <sub>2</sub> 0.5, brightener 0.2, and sulfate 2.31%.				
IC	ICM C11D017-00 ICS C11D003-00				
CC	46-5 (Surface Active Agents and Detergents)				

IT Air

(pressurized; non-aqueous, liquid detergent dispersions containing gasified particulate matter releasing)

IT 50-99-7, Glucose, uses 57-48-7, Fructose, uses 57-50-1, Sucrose, uses 59-23-4, Galactose, uses 63-42-3, Lactose 69-79-4, Maltose 9002-89-5, Poly(vinyl alcohol) 25322-68-3, Polyethylene glycol  
RL: TEM (Technical or engineered material use); USES (Uses)

(gasified core particulate; non-aqueous, liquid detergent dispersions containing gasified particulate)

IT 124-38-9, Carbon dioxide, uses 1333-74-0, Hydrogen, uses 7440-01-9, Neon, uses 7440-37-1, Argon, uses 7440-59-7, Helium, uses 7727-37-9, Nitrogen, uses 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(pressurized; non-aqueous, liquid detergent dispersions containing gasified particulate matter releasing)

IT 57-48-7, Fructose, uses

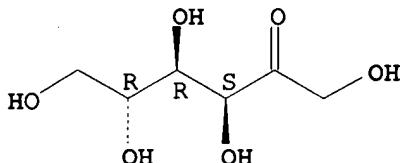
RL: TEM (Technical or engineered material use); USES (Uses)

(gasified core particulate; non-aqueous, liquid detergent dispersions containing gasified particulate)

RN 57-48-7 HCPLUS

CN D-Fructose (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 124-38-9, Carbon dioxide, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(pressurized; non-aqueous, liquid detergent dispersions containing gasified particulate matter releasing)

RN 124-38-9 HCPLUS

CN Carbon dioxide (8CI, 9CI) (CA INDEX NAME)

O=C=O

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 12 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1999:795931 HCPLUS

DN 132:37286

TI Granular, powder, and tablet detergent compositions containing gasified particulate matter for cleaning and bleaching of fabrics, hard surfaces, and dish ware

IN Parry, Diane

PA The Procter & Gamble Company, USA

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

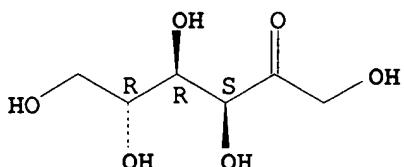
DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9964555	A1	19991216	WO 1999-IB994	19990601 <-
W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9939497	A1	19991230	AU 1999-39497	19990601 <-
PRAI US 1998-88177P	P	19980605	<-	
WO 1999-IB994	W	19990601	<-	
AB The title detergent contains .apprx.1-55% deterotive surfactant and .apprx.0.05-5% gasified particles that are solid at .apprx.25° and highly water-soluble, as an example polyethylene glycol encapsulating pressurized N (g). Preferably these detergent compns. addnl. comprise a peroxygen bleaching agent, an organic detergent builder, etc. dispersed in a liquid phase preferably structured with a surfactant.				
IC ICM C11D017-00				
IC S C11D003-00				
CC 46-5 (Surface Active Agents and Detergents)				
IT Air				
	(pressurized; detergent dispersions containing gasified particulate matter releasing)			
IT 50-99-7, Glucose, uses 57-48-7, Fructose, uses 57-50-1, Sucrose, uses 59-23-4, Galactose, uses 63-42-3, Lactose 69-79-4, Maltose 9002-89-5, Poly(vinyl alcohol) 25322-68-3, Polyethylene glycol				
	RL: TEM (Technical or engineered material use); USES (Uses)			
	(gasified core particulate; detergent dispersions containing gasified particulate)			
IT 124-38-9, Carbon dioxide, uses 1333-74-0, Hydrogen, uses 7440-01-9, Neon, uses 7440-37-1, Argon, uses 7440-59-7, Helium, uses 7727-37-9, Nitrogen, uses 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)			
	(pressurized; detergent dispersions containing gasified particulate matter releasing)			
IT 57-48-7, Fructose, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)			
	(gasified core particulate; detergent dispersions containing gasified particulate)			
RN 57-48-7 HCAPLUS				
CN D-Fructose (9CI) (CA INDEX NAME)				

## Absolute stereochemistry.



IT 124-38-9, Carbon dioxide, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pressurized; detergent dispersions containing gasified

particulate matter releasing)  
 RN 124-38-9 HCPLUS  
 CN Carbon dioxide (8CI, 9CI) (CA INDEX NAME)

O=C=O

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 13 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:571801 HCPLUS  
 DN 131:186609  
 TI Aerosol hard surface cleaner with enhanced bathroom soil removal  
 IN Chang, Jennifer; Ochomogo, Maria G.; Scott, Wayne B.; Robbins, Michael H.  
 PA The Clorox Company, USA  
 SO U.S., 10 pp., Cont.-in-part of U.S. 5,814,591.  
 CODEN: USXXAM

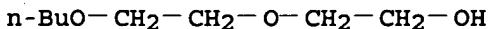
DT Patent  
 LA English

FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5948742	A	19990907	US 1998-59538	19980413 <--
	US 5814591	A	19980929	US 1996-632041	19960412 <--
	US 5972876	A	19991026	US 1996-731653	19961017 <--
	US 5948741	A	19990907	US 1997-827546	19970328 <--
	CA 2328247	AA	19991021	CA 1999-2328247	19990409 <--
	WO 9953009	A1	19991021	WO 1999-US7913	19990409 <--
	W: AU, BR, CA, CN, JP, KR, MX, PL, RU RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9935536	A1	19991101	AU 1999-35536	19990409 <--
	AU 768598	B2	20031218		
	EP 1071737	A1	20010131	EP 1999-917404	19990409 <--
	R: DE, ES, FR, GB, IT				
	JP 2002511522	T2	20020416	JP 2000-543557	19990409 <--
PRAI	US 1996-632041	A2	19960412	<--	
	US 1996-731653	A	19961017	<--	
	US 1997-827546	A2	19970328	<--	
	US 1998-59538	A	19980413	<--	
	WO 1999-US7913	W	19990409	<--	

AB An aerosol cleaning composition for hard surfaces is provided with a surprisingly enhanced bathroom soil removal capability. The dispensable includes: (a) an anionic, nonionic, amphoteric surfactant, and mixts. thereof with optionally, a quaternary ammonium surfactant, the total amount of said surfactant being present in a cleaning effective amount; (b) at least one water-soluble or dispersible organic solvent having a vapor pressure of at least 0.001 mm Hg at 25° C., said at least one organic solvent present in a solubilizing--or dispersion--effective amount; (c) a chelating agent selected from the group consisting of tri- or tetrapotassium ethylenediamine-tetraacetate (potassium EDTA), tri- or tetraammonium ethylenediamine-tetraacetate (ammonium EDTA) and mixts. thereof, said chelating agent present in an amount effective to enhance bathroom soil removal in said composition; (d) an effective amount of a propellant; and (e) the remainder, water. The preferred nonionic surfactant is an alkyl polyglycoside which provides a formulation stable to containment within a tin-plated steel can and which also facilitates processing of the composition

IC ICM C11D001-835  
 INCL 510191000  
 CC 46-6 (Surface Active Agents and Detergents)  
 ST aerosol hard surface cleaner; potassium ethylenediamine tetraacetate surface cleaner; ammonium ethylenediamine tetraacetate surface cleaner  
 IT Chelating agents  
     (aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT Glycosides  
     RL: TEM (Technical or engineered material use); USES (Uses)  
       (alkyl polyglycosides; aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT Surfactants  
     (glycosides or quaternary ammonium compds.; aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT Detergents  
     (hard surface; aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT Quaternary ammonium compounds, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
       (surfactant; aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT 112-34-5, Butyl Carbitol  
     RL: NUU (Other use, unclassified); USES (Uses)  
       (aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT 5964-35-2, Tetrapotassium ethylenediamine-tetraacetate 15934-01-7  
 17572-97-3 22473-78-5, Tetraammonium ethylenediamine-tetraacetate  
     RL: TEM (Technical or engineered material use); USES (Uses)  
       (aerosol hard surface cleaner with enhanced bathroom soil removal)  
 IT 112-34-5, Butyl Carbitol  
     RL: NUU (Other use, unclassified); USES (Uses)  
       (aerosol hard surface cleaner with enhanced bathroom soil removal)  
 RN 112-34-5 HCPLUS  
 CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 14 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1998:806738 HCPLUS  
 DN 130:53994  
 TI Hard-surface aqueous cleaner with reduced amount of residue  
 IN Cable, Elizabeth A.; Garabedian, Aram, Jr.  
 PA The Clorox Co., USA  
 SO PCT Int. Appl., 20 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
PI WO 9855570	A1	19981210	WO 1998-US11274	19980602 <--

W: AU, BR, CA, CN, JP, KR, MX, PL, RU  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE

US 6399553	B1	20020604	US 1997-869854	19970605 <--
CA 2294215	AA	19981210	CA 1998-2294215	19980602 <--
AU 9877181	A1	19981221	AU 1998-77181	19980602 <--
AU 734298	B2	20010607		
EP 986626	A1	20000322	EP 1998-925169	19980602 <--
EP 986626	B1	20040128		

R: DE, ES, FR, GB, IT

ES 2213282	T3	20040816	ES 1998-925169	19980602 <--
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PRAI US 1997-869854 A 19970605 <--  
 WO 1998-US11274 W 19980602 <--  
 AB A title cleaner with significantly improved residue removal and reduced filming/streaking comprises (a) ≥1 organic solvent with a vapor pressure of ≥0.001 mm Hg at 25°, and mixts. of such solvents, (b) ≥1 anionic surfactants, (c) a buffering system which comprises an N-containing buffer which will result in a pH >6.5, e.g., H<sub>2</sub>NCO<sub>2</sub>NH<sub>4</sub>, and (d) H<sub>2</sub>O. A typical cleaner contained Me<sub>2</sub>CHOH, BuOCH<sub>2</sub>CH<sub>2</sub>OH, Na octanesulfonate, decylated disodium oxydibenzene sulfonate, dodecylpyrrolidone, H<sub>2</sub>NCO<sub>2</sub>NH<sub>4</sub>, fragrance, NH<sub>4</sub>OH and dye in H<sub>2</sub>O.

IC ICM C11D001-83

ICS C11D003-43; C11D003-44

CC 46-6 (Surface Active Agents and Detergents)

ST hard surface cleaner isopropanol butyl glycol; octanesulfonate isopropanol butyl glycol hard surface cleaner; dodecylpyrrolidone hard surface cleaner; decyldiphenyl oxide disulfonate hard surface cleaner; ammonium carbamate buffer hard surface cleaner

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (aliphatic, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Surfactants  
 (anionic; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Glycols, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (ethers, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Ethers, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (glycol, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Solvents

(organic; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Buffers

Detergents  
 (reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT 1111-78-0, Ammonium carbamate

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT 67-63-0, Isopropanol, uses 111-76-2, Ethylene glycol monobutyl ether 151-21-3, Sodium laurylsulfate, uses 2687-96-9, Surfadone LP 300 29387-86-8, Propylene glycol monobutyl ether 58318-10-8, Dowfax 3B2

80763-10-6, Propylene glycol tert-butyl ether 143478-87-9, BioTerge PAS  
8S  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced-residue, aqueous, hard-surface **cleaner** containing organic  
solvents and surfactants and buffers)  
IT 111-76-2, Ethylene glycol monobutyl ether  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced-residue, aqueous, hard-surface **cleaner** containing organic  
solvents and surfactants and buffers)  
RN 111-76-2 HCAPLUS  
CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—OH

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 15 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1998:806737 HCAPLUS  
DN 130:53993  
TI Hard-surface aqueous **cleaner** with reduced amount of residues  
IN Cable, Elizabeth A.  
PA The Clorox Co., USA  
SO PCT Int. Appl., 24 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE:
PI WO 9855569	A1	19981210	WO 1998-US11272	19980602 <--
W: AU, BR, CA, CN, JP, KR, MX, PL, RU				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6432897	B1	20020813	US 1997-870093	19970605 <--
CA 2294209	AA	19981210	CA 1998-2294209	19980602 <--
AU 9877180	A1	19981221	AU 1998-77180	19980602 <--
AU 748915	B2	20020613		
EP 986625	A1	20000322	EP 1998-925167	19980602 <--
EP 986625	B1	20040211		
R: DE, ES, FR, GB, IT				
ES 2215303	T3	20041001	ES 1998-925167	19980602 <--
PRAI US 1997-870093	A	19970605 <--		
WO 1998-US11272	W	19980602 <--		
AB A title <b>cleaner</b> with significantly improved residue removal and reduced filming/streaking comprises (a) ≥1 organic <b>solvent</b> with a vapor pressure of ≥0.001 mm Hg at 25°, and mixts. of such solvents, (b) ≥1 anionic surfactant or a mixture of anionic and nonionic surfactants, (c) a buffering system which comprises an N-containing buffer which will result in a pH >6.5, e.g., H <sub>2</sub> NCO <sub>2</sub> NH <sub>4</sub> , and (d) H <sub>2</sub> O. A typical <b>cleaner</b> contained Me <sub>2</sub> CHOH, BuOCH <sub>2</sub> CH <sub>2</sub> OH, decylated disodium oxydibenzene sulfonate, dodecylpyrrolidone, ethoxylated (5-7 EO) C <sub>11</sub> -15 alcs., ethoxylated (6 EO) trimethylnonyl alc., cocoamidopropyl dimethylamine oxide, H <sub>2</sub> NCO <sub>2</sub> NH <sub>4</sub> , fragrance, NH <sub>4</sub> OH and dye in H <sub>2</sub> O.				
IC ICM C11D001-83				
ICS C11D003-43; C11D003-44				
CC 46-6 (Surface Active Agents and Detergents)				

ST hard surface cleaner isopropanol butyl glycol; ethoxylated fatty alc isopropanol butyl glycol hard surface cleaner; dodecylpyrrolidone hard surface cleaner; decyldiphenyl oxide disulfonate hard surface cleaner; cocoamidopropyltrimethylamine oxide hard surface cleaner; ammonium carbamate buffer hard surface cleaner

IT Alcohols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(C11-15, ethoxylated; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Alcohols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(aliphatic, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Surfactants  
(anionic; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Amides, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coco, N-[3-(dimethylamino)propyl], N-oxides; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Glycols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(ethers, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Ethers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(glycol, solvents; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Surfactants  
(nonionic; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Solvents  
(organic; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Buffers  
(pH >6.5; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT Surfactants  
(reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT 1111-78-0, Ammonium carbamate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(buffer; reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT 67-63-0, Isopropanol, uses 111-76-2, Ethylene glycol monobutyl ether 151-21-3, Sodium laurylsulfate, uses 2687-96-9, Surfadone LP 300 29387-86-8, Propylene glycol monobutyl ether 58318-10-8, Dowfax 3B2 60828-78-6, Polyethylene glycol trimethylnonyl ether 80763-10-6, Propylene glycol tert-butyl ether  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

IT 111-76-2, Ethylene glycol monobutyl ether  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced-residue, aqueous, hard-surface cleaner containing organic solvents and surfactants and buffers)

RN 111-76-2 HCPLUS

CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—OH

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 16 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1998:684934 HCAPLUS  
DN 129:277715  
TI Aerosol hard surface cleaner with enhanced soil removal  
IN Ochomogo, Maria; Brandtjen, Teressa; Mills, Scott C.; Julian, Jennifer C.; Robbins, Michael H.  
PA The Clorox Co., USA  
SO PCT Int. Appl., 26 pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9844080	A1	19981008	WO 1998-US5224	19980316 <--
	W: AU, BR, CA, JP, KR, PL				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5948741	A	19990907	US 1997-827546	19970328 <--
	CA 2291223	AA	19981008	CA 1998-2291223	19980316 <--
	AU 9864695	A1	19981022	AU 1998-64695	19980316 <--
	AU 760853	B2	20030522		
	EP 1015535	A1	20000705	EP 1998-910456	19980316 <--
	R: DE, ES, FR, GB, IT				
PRAI	US 1997-827546	A	19970328	<--	
	US 1996-632041	A1	19960412	<--	
	US 1996-731653	A2	19961017	<--	
	WO 1998-US5224	W	19980316	<--	

AB An aerosol dispensable cleaning composition for hard surfaces is provided. An aerosol dispensable cleaning composition for hard surfaces includes: (a) an anionic, nonionic, amphoteric surfactant, and mixts. thereof with optionally, a quaternary ammonium surfactant, the total amount of said surfactant being present in a cleaning effective amount; (b) at least one water-soluble or dispersible organic solvent having a vapor pressure of at least 0.001 mmHg at 25°, the at least one organic solvent present in a solubilizing - or dispersion - effective amount; (c) a chelating agent selected from the group consisting of tetrapotassium ethylenediaminetetraacetate (potassium EDTA), tetraammonium ethylenediaminetetraacetate (ammonium EDTA), and mixts. thereof, the chelating agent present in an amount effective to enhance soil removal in the composition; (d) an effective amount of a propellant; and (e) the remainder, water. The forming action of the aerosol composition facilitates the dispersement of the cleaning components.

IC ICM C11D001-12  
ICS C11D001-14; C11D001-28; C11D001-62; C11D001-72; C11D001-75  
CC 46-6 (Surface Active Agents and Detergents)  
ST tetrapotassium ethylenediaminetetraacetate aerosol cleaner hard surface; tetraammonium ethylenediaminetetraacetate aerosol cleaner hard surface  
IT Amine oxides  
RL: TEM (Technical or engineered material use); USES (Uses)  
(C12-16-alkyldimethyl; aerosol hard surface cleaner with enhanced soil removal)

IT Detergents  
 (aerosol hard surface cleaner with enhanced soil removal)

IT Surfactants  
 (amphoteric; aerosol hard surface cleaner with enhanced soil removal)

IT Surfactants  
 (anionic; aerosol hard surface cleaner with enhanced soil removal)

IT Surfactants  
 (nonionic; aerosol hard surface cleaner with enhanced soil removal)

IT 64-02-8, Tetrasodium ethylenediaminetetraacetate 5964-35-2,  
 Tetrapotassium ethylenediaminetetraacetate 22473-78-5, Tetraammonium ethylenediaminetetraacetate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (aerosol hard surface cleaner with enhanced soil removal)

IT 111-76-2, Ethylene glycol monobutyl ether 9036-19-5, Ethoxylated octylphenol 55963-06-9, BTC 2125M  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (aerosol hard surface cleaner with enhanced soil removal)

IT 111-76-2, Ethylene glycol monobutyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (aerosol hard surface cleaner with enhanced soil removal)

RN 111-76-2 HCPLUS

CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—OH

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 17 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1998:653538 HCPLUS  
 DN 129:262043  
 TI Reduced residue hard surface cleaner  
 IN Garabedian, Aram, Jr.; Mills, Scott C.; Sibert, William P.; Choy, Clement K.  
 PA The Clorox Company, USA  
 SO U.S., 9 pp., Cont.-in-part of U.S. 5523024.  
 CODEN: USXXAM

DT Patent  
 LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5817615	A	19981006	US 1996-657075	19960603 <--
	US 5252245	A	19931012	US 1992-832275	19920207 <--
	US 5468423	A	19951121	US 1993-134348	19931008 <--
	US 5585342	A	19961217	US 1995-410470	19950324 <--
	US 5523024	A	19960604	US 1995-518384	19950823 <--
PRAI	US 1992-832275	A2	19920207 <--		
	US 1993-134348	A2	19931008 <--		
	US 1995-410470	A2	19950324 <--		
	US 1995-518384	A2	19950823 <--		

OS MARPAT 129:262043

AB The invention provides an aqueous, hard surface cleaner with significantly improved residue removal and substantially reduced

filming/streaking, and comprises: (a) an effective amount of at least one organic solvent with a vapor pressure of at least 0.001 mm Hg at 25° C., and mixts. of such solvents; (b) an effective amount of at least one specified semi-polar amine oxide nonionic surfactant; (c) an effective amount of a buffering system which comprises a nitrogenous buffer which will result in a pH of greater than 6.5; and (d) the remainder as substantially all water.

IC ICM C11D001-75  
IC S ICS C11D003-44; C11D007-12  
INCL 510503000  
CC 46-6 (Surface Active Agents and Detergents)  
ST reduced residue hard surface cleaner; amine oxide hard surface cleaner; buffer hard surface cleaner  
IT Alcohols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(aliphatic, solvent; reduced residue hard surface cleaner)  
IT Amine oxides  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cocoalkyldimethyl; reduced residue hard surface cleaner)  
IT Glycols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(ethers, solvent; reduced residue hard surface cleaner)  
IT Ethers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(glycol, solvent; reduced residue hard surface cleaner)  
IT Detergents  
(hard surface; reduced residue hard surface cleaner)  
IT Surfactants  
(nonionic; reduced residue hard surface cleaner)  
IT Solvents  
(organic; reduced residue hard surface cleaner)  
IT Buffers  
(reduced residue hard surface cleaner)  
IT Amine oxides  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced residue hard surface cleaner)  
IT 141-43-5, Monoethanolamine, uses 506-87-6, Ammonium carbonate  
1066-33-7, Ammonium bicarbonate 1336-21-6, Ammonium hydroxide  
RL: NUU (Other use, unclassified); USES (Uses)  
(buffer; reduced residue hard surface cleaner)  
IT 1643-20-5, Lauryldimethylamine Oxide  
RL: TEM (Technical or engineered material use); USES (Uses)  
(reduced residue hard surface cleaner)  
IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol,  
uses 71-23-8, n-Propanol, uses 111-76-2, Ethylene glycol  
monobutyl ether 2807-30-9, Ethylene glycol monopropyl ether  
25917-35-5, Hexanol 29387-86-8, Propylene glycol monobutyl ether  
30136-13-1, Propylene glycol monopropyl ether 30899-19-5, Pentanol  
35296-72-1, Butanol 80763-10-6, Propylene glycol tert-butyl ether  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; reduced residue hard surface cleaner)  
IT 111-76-2, Ethylene glycol monobutyl ether 2807-30-9,  
Ethylene glycol monopropyl ether  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; reduced residue hard surface cleaner)  
RN 111-76-2 HCAPLUS  
CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

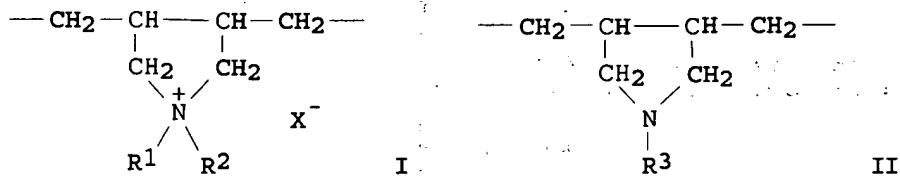
$$n\text{-BuO}-\text{CH}_2-\text{CH}_2-\text{OH}$$

RN 2807-30-9 HCAPLUS  
CN Ethanol, 2-propoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$$n\text{-PrO}-\text{CH}_2-\text{CH}_2-\text{OH}$$

RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 18 OF 46 HCPLUS: COPYRIGHT 2006 ACS on STN  
AN 1998:334795 HCPLUS  
DN 129:68956  
TI Aqueous ink-jet ink compositions and printing method therewith  
IN Kitamura, Kazuhiko  
PA Seiko Epson Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO.  
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PI JP 10140061 A2 19980526 JP 1996-302224  
PRAI JP 1996-302224 19961113 <--  
GI



AB Title compns., with good smudge and water resistance, contain alkali-soluble colorants, cationic resins having I or II units [ $R1-R3 = H, C1-3$  (hydroxy) alkyl;  $X = (in)organic anion$ ], and organic **solvents** having a vapor pressure smaller than that of water. An aqueous ink containing C.I. acid yellow 23, diallyldimethylamine hydrochloride homopolymer, triethylene glycol mono-Me ether, and N-methyl-2-pyrrolidinone showed good storage stability at  $60^\circ$  for 1 wk and clogging, smudge, and water resistance.

IC ICM C09D011-00  
ICS C09D011-10

CC 42-12 (Coatings, Inks, and Related Products)

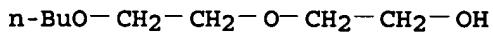
IT 26062-79-3DP, Diallyldimethylammonium chloride homopolymer, sodium hydroxide-treated derivs. 26062-79-3P, Diallyldimethylammonium chloride homopolymer 26063-69-4DP, Diallylamine hydrochloride homopolymer, sodium hydroxide-treated derivs. 26063-69-4P, Diallylamine hydrochloride homopolymer 29566-78-7DP, Diallylmethylbenzyl ammonium chloride homopolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (aqueous ink-jet inks containing cationic resins and alkali-soluble colorants with storage stability)

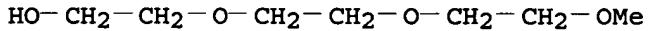
IT 56-81-5, Glycerol, uses 57-55-6, Propylene glycol, uses 96-48-0,  
 $\gamma$ -Butyrolactone 112-34-5, Diethylene glycol monobutyl ether 112-35-6, Triethylene glycol monomethyl ether 616-45-5,  
 2-Pyrrolidinone 872-50-4, N-Methyl-2-pyrrolidinone, uses  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (aqueous ink-jet inks containing cationic resins and alkali-soluble colorants with storage stability)

IT 112-34-5, Diethylene glycol monobutyl ether 112-35-6,  
 Triethylene glycol monomethyl ether  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (aqueous ink-jet inks containing cationic resins and alkali-soluble colorants with storage stability)

RN 112-34-5 HCAPLUS  
 CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



RN 112-35-6 HCAPLUS  
 CN Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L83 ANSWER 19 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1998:251239 HCAPLUS  
 DN 128:258759  
 TI Low odor, hard surface cleaner with enhanced soil removal  
 IN Robbins, Michael; Julian, Jennifer C.  
 PA Clorox Company, USA  
 SO PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9816606	A1	19980423	WO 1997-US17459	19970930 <--
	W: AU, BR, CA, CN, JP, KR, MX, PL, RU RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5972876	A	19991026	US 1996-731653	19961017 <--
	CA 2263505	AA	19980423	CA 1997-2263505	19970930 <--
	AU 9746012	A1	19980511	AU 1997-46012	19970930 <--
	AU 743187	B2	20020117		
	BR 9711202	A	19990817	BR 1997-11202	19970930 <--
	EP 937125	A1	19990825	EP 1997-944543	19970930 <--
	R: DE, ES, FR, GB, IT				
	JP 2001502373	T2	20010220	JP 1998-518377	19970930 <--
	KR 2000049238	A	20000725	KR 1999-703342	19990416 <--
	US 6214784	B1	20010410	US 1999-427156	19991025 <--
PRAI	US 1996-731653	A	19961017 <--		
	WO 1997-US17459	W	19970930 <--		

AB An aqueous hard surface cleaner comprises (a) either an anionic, nonionic, amphoteric surfactant, and mixts. with optionally, a quaternary ammonium surfactant; (b) ≥1 water-soluble or dispersible organic solvent having a vapor pressure ≥0.001 mm Hg at 25°; (c) tetrapotassium ethylenediamine tetraacetate (potassium EDTA) as a chelating agent; and (d) the remainder, H<sub>2</sub>O.

IC ICM C11D001-94  
ICS C11D003-04; C11D003-43

CC 46-6 (Surface Active Agents and Detergents)

ST potassium EDTA chelating agent cleaning compn; surfactant chelating agent cleaning compn; soap scum removal bathroom cleaning compn

IT Buildings  
(bathrooms, cleaning of; low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

IT Glycols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(ethers, solvent; low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

IT Ethers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(glycol, solvent; low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

IT Chelating agents

Detergents  
(low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

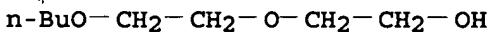
IT 5964-35-2, Tetrapotassium EDTA  
RL: MOA (Modifier or additive use); USES (Uses)  
(low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

IT 112-34-5, Butyl carbitol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

IT 112-34-5, Butyl carbitol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; low odor, hard surface cleaner with enhanced soap scum removal by potassium EDTA)

RN 112-34-5 HCPLUS

CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 20 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
AN 1997:740359 HCPLUS  
DN 128:4923  
TI Cleaning dyed fabrics  
IN Siklosi, Michael Peter; Hortel, Thomas Charles; Holt, John Henry; Wise, Rodney Mahlon; Lawyer, John Virgil; Greene, Cathy Lynne; Wiedemann, Donna Jane; Joyce, Jonathan Livingston  
PA Procter & Gamble Company, USA; Siklosi, Michael Peter; Hortel, Thomas Charles; Holt, John Henry; Wise, Rodney Mahlon; Lawyer, John Virgil; Greene, Cathy Lynne; Wiedemann, Donna Jane; Joyce, Jonathan Livingston  
SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9741292	A1	19971106	WO 1997-US6998	19970428 <--

W: BR, CA, CN, JP, MX, US  
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRAI US 1996-16686P P 19960502 &lt;--

AB **Fabrics** are cleaned and refreshed in an in-home process with little or no dye transfer by means of **cleaning compns.** which contain dye fixatives. The compns. for **cleaning** the **fabrics** contain a solvent such as propoxypropoxypropanol, a dye fixative, water, and optionally, a surfactant. Stains may be removed from the **fabrics** by **treatment** with the above compns. under pressure, and the entire **fabric** may be dry-cleaned and refreshed by pretreatment with these compns. under pressure and then tumbled in a hot-air dryer in a bag. The **fabrics** are deodorized by including a sheet impregnated by a releasable composition containing water, surfactant such as Tween 20, and perfume in the bag during the tumbling in the hot-air dryer.

IC ICM D06L001-04  
ICS C11D003-20

CC 46-5 (Surface Active Agents and Detergents)

ST household dry **cleaning** deodorization dyed **fabric**

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(C12-13 alkyl ethers, surfactant; household dry-cleaning and deodorization of dyed **fabrics**)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(C12-13, ethoxylated, surfactant; household dry-cleaning and deodorization of dyed **fabrics**)

IT Dyes

(fixatives; household dry-cleaning and deodorization of dyed **fabrics**)

IT Deodorization

Dry **cleaning**  
(household dry-cleaning and deodorization of dyed **fabrics**)

IT Amines, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(polyamines, nonpolymeric, dye fixative; household dry-cleaning and deodorization of dyed **fabrics**)

IT 138069-15-5, Sandofix TP

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dye fixative; household dry-cleaning and deodorization of dyed **fabrics**)

IT 35075-23-1 124881-34-1 185627-94-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; household dry-cleaning and deodorization of dyed **fabrics**)

IT 25322-68-3D, PEG, C12-13 alkyl ethers

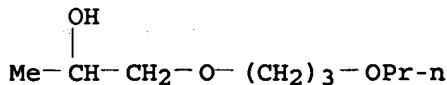
RL: TEM (Technical or engineered material use); USES (Uses)  
(surfactant; household dry-cleaning and deodorization of dyed **fabrics**)

IT 35075-23-1

RL: TEM (Technical or engineered material use); USES (Uses)  
 (solvent; household dry-cleaning and deodorization of dyed  
 fabrics)

RN 35075-23-1 HCAPLUS

CN 2-Propanol, 1-(3-propoxypropoxy)- (9CI) (CA INDEX NAME)



L83 ANSWER 21 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:9921 HCAPLUS

DN 126:61922

TI Reduced residue hard surface cleaner

IN Choy, Clement K.; Garabedian, Aram, Jr.; Julian, Jennifer C.; Robinson, Gary L.

PA The Clorox Company, USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5585342	A	19961217	US 1995-410470	19950324 <--
	US 5523024	A	19960604	US 1995-518384	19950823 <--
	CA 2216235	AA	19961003	CA 1996-2216235	19960226 <--
	WO 9630473	A1	19961003	WO 1996-US2518	19960226 <--
	W: AU, BR, CA, JP, KR, MX, PL, RU				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9650274	A1	19961016	AU 1996-50274	19960226 <--
	EP 815189	A1	19980107	EP 1996-907111	19960226 <--
	R: DE, ES, FR, GB, IT				
	BR 9607819	A	19980707	BR 1996-7819	19960226 <--
	JP 11502884	T2	19990309	JP 1996-529383	19960226 <--
	US 5817615	A	19981006	US 1996-657075	19960603 <--
	US 5714448	A	19980203	US 1996-768246	19961216 <--
	US 5851981	A	19981222	US 1997-916893	19970822 <--
PRAI	US 1992-832275	A2	19920207	<--	
	US 1993-134348	A2	19931008	<--	
	US 1995-410470	A2	19950324	<--	
	US 1995-518384	A2	19950823	<--	
	WO 1996-US2518	W	19960226	<--	
	US 1996-768246	A3	19961216	<--	

OS MARPAT 126:61922

AB An aqueous, hard surface cleaner with significantly improved residue removal and substantially reduced filming/streaking comprises: (a) ≥1 organic solvent with a vapor pressure of ≥0.001 mm Hg at 25°, and mixts. of such solvents, (b) ≥1 semi-polar amine oxide nonionic surfactant, (c) 0.01-2% of a buffering system which comprises ammonium or alkaline earth carbamate and (d) the remainder as substantially all water. A composition contained iso-PrOH, propylene glycol tert-Bu ether, Na lauryl sulfate, dodecylpyrrolidone, cocoamidopropylamine oxide, a carbamate buffer, additives, and water.

IC ICM C11D001-75

ICS C11D003-32; C11D003-43

INCL 510433000

CC 46-6 (Surface Active Agents and Detergents)  
 ST amine oxide nonionic surfactant cleaner; org solvent cleaner; isopropanol solvent cleaner; carbamate buffer cleaner  
 IT Amine oxides  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (cocoamidopropyl; reduced residue hard surface cleaner)  
 IT Surfactants  
 (nonionic; reduced residue hard surface cleaner)  
 IT Solvents  
 (organic; reduced residue hard surface cleaner)  
 IT Detergents  
 (reduced residue hard surface cleaner)  
 IT 463-77-4, Carbamic acid, uses 1066-33-7, Ammonium bicarbonate  
 1336-21-6, Ammonium hydroxide ((NH4)(OH))  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (buffer; reduced residue hard surface cleaner)  
 IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol,  
 uses 71-23-8, n-Propanol, uses 111-76-2, Ethylene glycol monobutyl ether 2807-30-9, Ethylene glycol monopropyl ether 25917-35-5, Hexanol 29387-86-8, Propylene glycol monobutyl ether 30136-13-1, Propylene glycol monopropyl ether 30899-19-5, Pentanol 35296-72-1, Butanol 80763-10-6, Propylene glycol tert-butyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (reduced residue hard surface cleaner)  
 IT 111-76-2, Ethylene glycol monobutyl ether 2807-30-9,  
 Ethylene glycol monopropyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (reduced residue hard surface cleaner)  
 RN 111-76-2 HCPLUS  
 CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO-CH<sub>2</sub>-CH<sub>2</sub>-OH

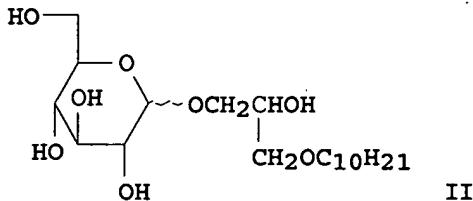
RN 2807-30-9 HCPLUS  
 CN Ethanol, 2-propoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

n-PrO-CH<sub>2</sub>-CH<sub>2</sub>-OH

L83 ANSWER 22 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1996:605324 HCPLUS  
 DN 125:248317  
 TI Preparation of (poly)glyceryl glycoside  $\alpha$ -sulfo aliphatic acid esters as surfactants  
 IN Toda, Haruhiko; Ueda, Shigeyuki; Myake, Hiroshi; Matsuda, Kazuhiko  
 PA Lion Corp, Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08188586	A2	19960723	JP 1994-340244	19941229 <--
PRAI JP 1994-340244			19941229 <--	

GI



AB (Poly)glyceryl glycoside  $\alpha$ -sulfoalkanoic acid esters  
 $[(R1O)-(R3O)t]_w[Z1(OH)c-w-1][Z2(OH)f-1-s][O2CCHR2SO3M]_s$  [I;  $[Z1(OH)c-w-1]$   
= (poly)glycerin residue;  $[(R1O)-(R3O)t]$  = aliphatic group chain bonded to  
the (poly)glycerin residue;  $[Z2(OH)f-1-s]$  = sugar residue;  $[O2CCHR2SO3M]_s$   
=  $\alpha$ -sulfo aliphatic acid residue bonded to the latter sugar residue;  $Z1$   
= (poly)glycerin skeleton left after removing HO groups from the  
(poly)glycerin;  $Z2$  = sugar skeleton left after removing HO groups from the  
sugar;  $c, f$  = number of HO groups in the (poly)glycerin and sugar, resp.;  $R1$   
= C1-30 aliphatic group chain;  $R2$  = C4-30 aliphatic group chain;  $R3$  = lower  
alkylene;  $M$  = H, salt-forming cation;  $c \geq 3$ ;  $f \geq 4$ ;  
 $1 \leq w \leq (c-1)$ ;  $1 \leq s \leq (f-1)$ ;  $t = 0-20$ ; wherein the  
(poly)glycerin and the sugar residue are bonded through O atom to form a  
glycoside] are prepared. A cleaning composition contains I. These  
compds. are mild to skin and hair and have excellent water solubility and  
resistance to hydrolysis. Above cleaning composition has excellent  
anti-hard water property and dispersibility. Thus, 41.0 g Me  
 $\alpha$ -sulfopalmitate and 39.4 g decylglycerol glucopyranoside (II) were  
added to 100 mL DMF, treated with 1.0 g 28% NaOMe in MeOH,  
stirred at 100° and pressure 33 mmHg for 7 h, and after  
distilling off DMF under reduced pressure and adding water, stirred  
with ion exchange resin Dowex 50W-X4, and filtered to give, after  
freeze-drying, II mono( $\alpha$ -sulfopalmitate) Na salt and  
di( $\alpha$ -sulfopalmitate) di-Na salt in 95 and 2%, resp. A dish  
detergent, shampoo, body shampoo, facial cleanser,  
fabric detergent, and tooth paste containing I were formulated.

IC ICM C07H015-04

ICS A61K007-00; A61K007-50; C11D001-26

CC 33-3 (Carbohydrates)

Section cross-reference(s): 46, 62

IT Cosmetics

Detergents

Surfactants

(preparation of (poly)glyceryl glycoside  $\alpha$ -sulfo aliphatic acid esters as  
surfactants for cleaning agents and cosmetics)

IT Detergents

(cleaning compns., preparation of (poly)glyceryl glycoside  
 $\alpha$ -sulfo aliphatic acid esters as surfactants for cleaning  
agents and cosmetics)

IT 4016-21-1, Methyl  $\alpha$ -sulfolaurate sodium salt 4016-24-4, Methyl  
 $\alpha$ -sulfopalmitate sodium salt 4062-78-6, Methyl  
 $\alpha$ -sulfostearate sodium salt 181814-91-5 181814-94-8  
181814-95-9 182073-12-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of (poly)glyceryl glycoside  $\alpha$ -sulfo aliphatic acid esters as  
surfactants for cleaning agents and cosmetics)

IT 182149-46-8P 182149-47-9P 182149-48-0P 182149-49-1P 182149-50-4P  
 182149-51-5P 182149-52-6P 182179-26-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)

(preparation of (poly)glyceryl glycoside  $\alpha$ -sulfo aliphatic acid esters as surfactants for cleaning agents and cosmetics)

IT 181814-94-8 181814-95-9 182073-12-7

RL: RCT (Reactant); RACT (Reactant or reagent)

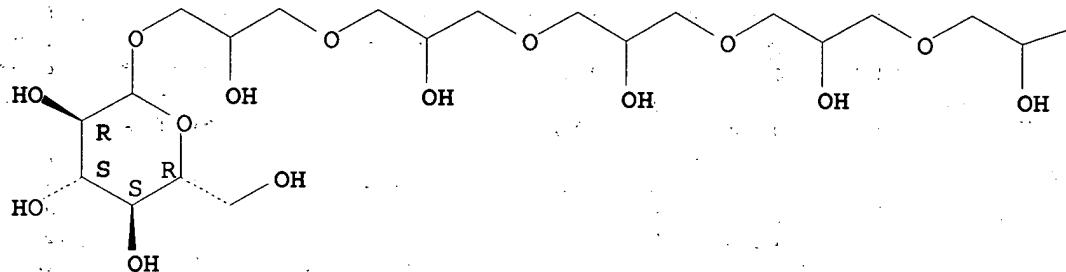
(preparation of (poly)glyceryl glycoside  $\alpha$ -sulfo aliphatic acid esters as surfactants for cleaning agents and cosmetics)

RN 181814-94-8 HCPLUS

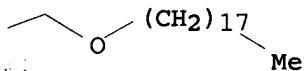
CN 4,8,12,16,20-Pentaoxaoctatriacontane-2,6,10,14,18-pentol,  
 1-( $\beta$ -D-glucopyranosyloxy)- (9CI) (CA INDEX NAME)

Absolute stereochemistry:

PAGE 1-A



PAGE 1-B

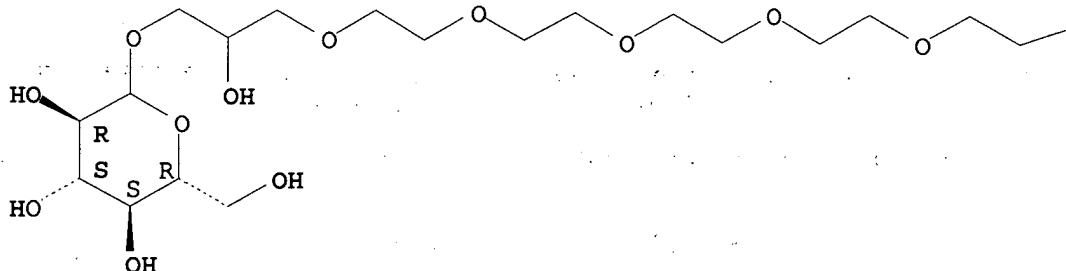


RN 181814-95-9 HCPLUS

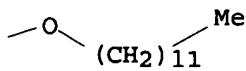
CN D-Glucopyranoside, 2-hydroxy-4,7,10,13,16,19-hexaoxahentriaccont-1-yl (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry:

PAGE 1-A

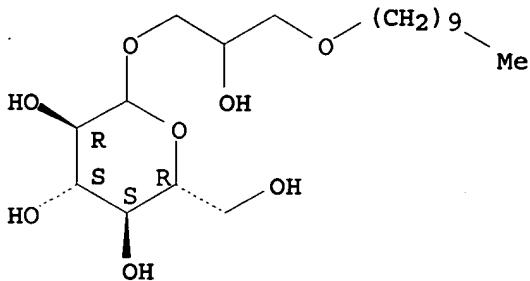


PAGE 1-B



RN 182073-12-7 HCPLUS  
 CN D-Glucopyranoside, 3-(decyloxy)-2-hydroxypropyl (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L83 ANSWER 23 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1996:388617 HCPLUS  
 DN 125:118120  
 TI Reduced-residue hard surface cleaner  
 IN Garabedian, Aram, Jr.; Mills, Scott C.; Sibert, William P.; Choy, Clement K.  
 PA Clorox Co., USA  
 SO U.S., 8 pp., Continuation-in-part of U.S. Ser. No. 410, 470.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5523024	A	19960604	US 1995-518384	19950823 <--
	US 5252245	A	19931012	US 1992-832275	19920207 <--
	US 5468423	A	19951121	US 1993-134348	19931008 <--
	US 5585342	A	19961217	US 1995-410470	19950324 <--
	US 5817615	A	19981006	US 1996-657075	19960603 <--
PRAI	US 1992-832275	A2	19920207	<--	
	US 1993-134348	A2	19931008	<--	
	US 1995-410470	A2	19950324	<--	
	US 1995-518384	A2	19950823	<--	

OS MARPAT 125:118120  
 AB An aqueous, hard surface cleaner with significantly improved residue removal and substantially reduced filming/streaking comprises (a) an effective amount of  $\geq 1$  organic solvent with a vapor pressure of  $\geq 0.001$  mm Hg at  $25^\circ$  and mixts. of such solvents; (b) an effective amount of  $\geq 1$  semi-polar nonionic surfactant, the surfactant having the structure  $\text{R}_1\text{R}_2\text{R}_3\text{N}\rightarrow\text{O}$ , wherein  $\text{R}_1$  is C5-20 alkyl,  $\text{R}_2$  and  $\text{R}_3$  are both C1-4 alkyl, or  $(\text{CH}_2)_p\text{OH}$ , although  $\text{R}_2$  and  $\text{R}_3$  do not have to be equal, and  $p$  is 1-6; (c) an effective amount of a buffering system which comprises a nitrogenous buffer which will result in a pH of  $\geq 6.5$ ; and (d) the remainder as substantially all water.

IC ICM C11D001-66

ICS C11D003-26; C11D003-28; C11D003-43  
 INCL 252547000  
 CC 46-6 (Surface Active Agents and Detergents)  
 ST hard surface cleaner reduced residue  
 IT Buffer substances and systems  
     (nitrogenous; reduced-residue hard surface cleaner)  
 IT Glass, oxide  
     RL: MSC (Miscellaneous)  
     (reduced-residue hard surface cleaner)  
 IT Alcohols, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (reduced-residue hard surface cleaner)  
 IT Amines, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (N-oxides, reduced-residue hard surface cleaner)  
 IT Detergents  
     (cleaning compns., reduced-residue hard surface  
     cleaner)  
 IT Amines, uses  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (coco alkyltrimethyl, N-oxides, reduced-residue hard surface  
     cleaner)  
 IT Surfactants  
     (nonionic, semi-polar; reduced-residue hard surface cleaner)  
 IT 141-43-5, Monoethanolamine, uses 1066-33-7, Ammonium bicarbonate  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (buffer; reduced-residue hard surface cleaner)  
 IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol,  
     uses 71-23-8, n-Propanol, uses 71-36-3, Butanol, uses 71-41-0,  
     Pentanol, uses 111-27-3, Hexanol, uses 111-76-2, Ethylene  
     glycol monobutyl ether 2807-30-9, Ethylene glycol monopropyl  
     ether 29387-86-8, Propylene glycol monobutyl ether 30136-13-1,  
     Propylene glycol monopropyl ether  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (reduced-residue hard surface cleaner)  
 IT 111-76-2, Ethylene glycol monobutyl ether 2807-30-9,  
     Ethylene glycol monopropyl ether  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (reduced-residue hard surface cleaner)  
 RN 111-76-2 HCPLUS  
 CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—OH

RN 2807-30-9 HCPLUS  
 CN Ethanol, 2-propoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

n-PrO—CH<sub>2</sub>—CH<sub>2</sub>—OH

L83 ANSWER 24 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1996:196754 HCPLUS  
 DN 124:235620  
 TI Watermark-free cleaning and drying method  
 IN Ishikawa, Masahiro  
 PA Olympus Optical Co, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07328563	A2	19951219	JP 1994-155226	19940614 <--
PRAI JP 1994-155226		19940614	<--	

AB The title method comprises washing a substrate with an aqueous detergent, washing with water, replacing water with a water- and silicone-miscible solvent, and washing and drying with vapor of a silicone solvent under reduced pressure. A cut camera lens was washed with an alkali detergent (EE 1120), showered with water, soaked in isopropanol while under oscillation at 28 kHz and 600 W for 5 min, treated in a silicone vapor, and dried in vacuo.

IC ICM B08B003-08

ICS C23G005-02

CC 46-6 (Surface Active Agents and Detergents)

ST watermark cleaning drying method; silicone solvent cleaning drying

IT Lenses  
(camera; watermark-free cleaning and drying method)

IT Cleaning

Drying  
(watermark-free cleaning and drying method)

IT Alcohols, uses

Siloxanes and Silicones, uses

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(watermark-free cleaning and drying method)

IT Eye  
(lens, glass; watermark-free cleaning and drying method)

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(pipe; watermark-free cleaning and drying method)

IT 67-63-0, Isopropanol, uses 111-77-3, Diethylene glycol monomethyl ether 175069-55-3, EE 1120

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(watermark-free cleaning and drying method)

IT 111-77-3, Diethylene glycol monomethyl ether

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(watermark-free cleaning and drying method)

RN 111-77-3 HCPLUS

CN Ethanol, 2-(2-methoxyethoxy)-(6CI, 8CI, 9CI) (CA INDEX NAME)

MeO—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OH

L83 ANSWER 25 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1996:130933 HCPLUS

DN 124:149094

TI Method for impregnating wood with preservatives without the needs of pre-drying of wood

IN Kuwatsuru, Hiroo; Yoshida, Shinji; Igarashi, Rei

PA Takeda Chemical Industries Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07314409	A2	19951205	JP 1994-326548	19941228 <--
	US 5665432	A	19970909	US 1996-701054	19960821 <--

PRAI JP 1994-59107 A 19940329 <--  
 JP 1994-326548 A 19941228 <--  
 US 1995-412151 B1 19950328 <--

AB In the title method, green wood stock is firstly impregnated with an organic solvent selected from those miscible with water and compatible with wood-preserving agents comprising active components and high-boiling organic solvents, e.g., di-Bu phthalate, followed by impregnated with the agents. Several examples of the organic solvents are alcs. and glycols.

IC ICM B27K003-50  
 ICS B27K003-02

CC 43-2 (Cellulose, Lignin, Paper, and Other Wood Products)

ST pressure treatment wood compatible solvent;  
 alc solvent wood preservative impregnation; green wood preservative impregnation

IT 56-81-5, Glycerin, uses 57-55-6, Propylene glycol, uses 64-17-5,  
 Ethanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses  
 71-23-8, Propanol, uses 75-05-8, Acetonitrile, uses 107-21-1, Ethylene  
 glycol, uses 107-88-0, 1,3-Butanediol 109-86-4, Ethylene  
 glycol monomethyl ether 110-63-4, 1,4-Butanediol, uses 110-80-5  
 , Ethylene glycol monoethyl ether 111-29-5, 1,5-Pentanediol  
 111-46-6, Diethylene glycol, uses 111-76-2, Ethylene  
 glycol monobutyl ether 111-77-3, Diethylene glycol monomethyl  
 ether 111-90-0, Diethylene glycol monoethyl ether  
 112-27-6, Triethylene glycol 112-34-5, Diethylene glycol  
 monobutyl ether 112-35-6, Triethylene glycol monomethyl ether  
 112-49-2, Triethylene glycol dimethyl ether 112-50-5,  
 Triethylene glycol monoethyl ether 112-60-7, Tetraethylene  
 glycol 504-63-2, Trimethylene glycol 628-68-2, Diethylene glycol  
 diacetate 2517-43-3, 3-Methoxybutanol 2568-33-4, 3-Methylbutane-1,3-  
 diol 9004-74-4, Polyethylene glycol monomethyl ether 9004-77-7,  
 Polyethylene glycol monobutyl ether 25265-71-8, Dipropylene  
 glycol 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene  
 glycol 56539-66-3, 3-Methyl-3-methoxybutanol

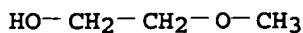
RL: NUU (Other use, unclassified); USES (Uses)  
 (in method for impregnating wood with preservatives without needs of  
 drying)

IT 109-86-4, Ethylene glycol monomethyl ether 110-80-5,  
 Ethylene glycol monoethyl ether 111-46-6, Diethylene glycol,  
 uses 111-76-2, Ethylene glycol monobutyl ether 111-77-3  
 , Diethylene glycol monomethyl ether 111-90-0, Diethylene glycol  
 monoethyl ether 112-27-6, Triethylene glycol 112-34-5,  
 Diethylene glycol monobutyl ether 112-35-6, Triethylene glycol  
 monomethyl ether 112-50-5, Triethylene glycol monoethyl ether  
 112-60-7, Tetraethylene glycol 25265-71-8, Dipropylene  
 glycol

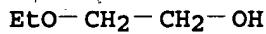
RL: NUU (Other use, unclassified); USES (Uses)  
 (in method for impregnating wood with preservatives without needs of  
 drying)

RN 109-86-4 HCPLUS

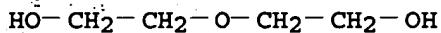
CN Ethanol, 2-methoxy- (8CI, 9CI) (CA INDEX NAME)



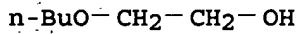
RN 110-80-5 HCAPLUS  
CN Ethanol, 2-ethoxy- (8CI, 9CI) (CA INDEX NAME)



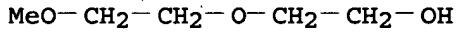
RN 111-46-6 HCAPLUS  
CN Ethanol, 2,2'-oxybis- (9CI) (CA INDEX NAME)



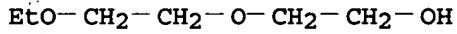
RN 111-76-2 HCAPLUS  
CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)



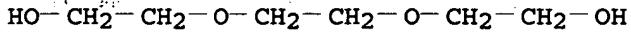
RN 111-77-3 HCAPLUS  
CN Ethanol, 2-(2-methoxyethoxy)- (6CI, 8CI, 9CI) (CA INDEX NAME)



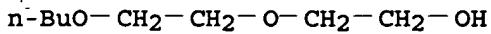
RN 111-90-0 HCAPLUS  
CN Ethanol, 2-(2-ethoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



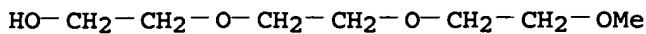
RN 112-27-6 HCAPLUS  
CN Ethanol, 2,2'-(1,2-ethanediylbis(oxy))bis- (9CI) (CA INDEX NAME)



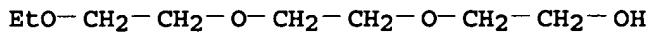
RN 112-34-5 HCAPLUS  
CN Ethanol, 2-(2-butoxyethoxy)- (8CI, 9CI) (CA INDEX NAME)



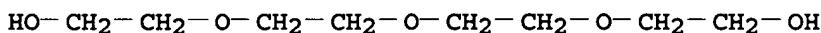
RN 112-35-6 HCAPLUS  
CN Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



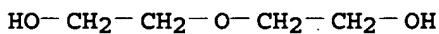
RN 112-50-5 HCPLUS  
 CN Ethanol, 2-[2-(2-ethoxyethoxy)ethoxy]- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 112-60-7 HCPLUS  
 CN Ethanol, 2,2'-(oxybis(2,1-ethanediyl)oxy)bis- (9CI) (CA INDEX NAME)



RN 25265-71-8 HCPLUS  
 CN Propanol, oxybis- (9CI) (CA INDEX NAME)



2 ( D1-Me )

L83 ANSWER 26 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1988:147386 HCPLUS

DN 108:147386

TI Flavoring materials for cigarette filters

IN Veluz, Serge

PA Baumgartner Papiers S. A., Fr.

SO Patentschrift (Switz.), 5 pp.

CODEN: SWXXAS

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI CH 662042 A 19870915 CH 1983-3865 19830714 <--

PRAI CH 1983-3865 19830714 <--

AB Cigarette filter flavoring materials are dissolved in a solvent having  $\leq 40$  Pa vapor pressure (20°). The solvent depresses the vapor pressure of the flavorant, without affecting, however, flavorant uptake into the moist, hot tobacco smoke passing through the filter. Suitable solvents are 1,3-butylene glycol, 1,2-propylene glycol, diethylene glycol, triethylene glycol, glycerol and polyethylene glycol. Cigarette filters were treated with a mixture of 30% menthol and 70% 1,2-propylene glycol, at 2 mg menthol/filter.

IC ICM A24D003-14

CC 11-7 (Plant Biochemistry)

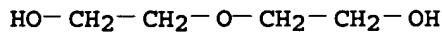
IT 56-81-5, Glycerol, biological studies 57-55-6, 1,2-Propylene glycol,

biological studies 107-88-0, 1,3-Butylene glycol 111-46-6,

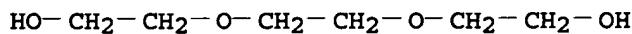
Diethylene glycol, biological studies 112-27-6, Triethylene

glycol 25322-68-3, Polyethylene glycol

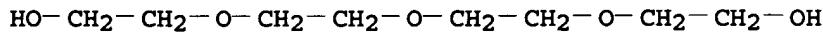
IT RL: BIOL (Biological study)  
 (solvent, for cigarette filter flavorants)  
 111-46-6, Diethylene glycol, biological studies 112-27-6  
 , Triethylene glycol  
 RL: BIOL (Biological study)  
 (solvent, for cigarette filter flavorants)  
 RN 111-46-6 HCAPLUS  
 CN Ethanol, 2,2'-oxybis- (9CI) (CA INDEX NAME)



RN 112-27-6 HCAPLUS  
 CN Ethanol, 2,2'-(1,2-ethanediylbis(oxy))bis- (9CI) (CA INDEX NAME)



L83 ANSWER 27 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1981:622510 HCAPLUS  
 DN 95:222510  
 TI Plant data for Tetra Process  
 AU Symoniak, M. F.; Ganju, Y. N.; Vidueira, J. A.  
 CS Union Carbide Corp., Tarrytown, NY, USA  
 SO Hydrocarbon Processing, International Edition (1981), 60(9),  
 139-42  
 CODEN: IHPRBS; ISSN: 0018-8190  
 DT Journal  
 LA English  
 AB The Tetra process for the extraction of C6-8 aroms. from gasoline fractions is based on the use of aqueous tetraethylene glycol (I) [112-60-7] solution as a solvent, I being more efficient than diethylene glycol. Plant data for the Tetra process are presented. The good performance characteristics of the plant are attributed to the capacity and selectivity of I; a water-wash scheme for solvent recovery; the use of an adsorbent-based, above-atmospheric pressure, solvent regenerator; and the use of liquid-liquid extraction trays.  
 CC 51-6 (Fossil Fuels, Derivatives, and Related Products)  
 IT 112-60-7  
 RL: USES (Uses)  
 (in extraction of aromatic hydrocarbons from gasoline)  
 IT 112-60-7  
 RL: USES (Uses)  
 (in extraction of aromatic hydrocarbons from gasoline)  
 RN 112-60-7 HCAPLUS  
 CN Ethanol, 2,2'-(oxybis(2,1-ethanediyl))bis- (9CI) (CA INDEX NAME)



L83 ANSWER 28 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1980:622035 HCAPLUS  
 DN 93:222035  
 TI Modified polybutadiene coating materials  
 PA Nippon Oil Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

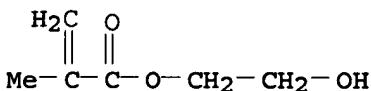
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	JP 55094905	A2	19800718	JP 1979-972	19790111 <--	
PRAI	JP 1979-972	A	19790111	<--		
AB	Polybutadiene (I) having number-average mol. weight 800-104 and >30% 1,2-configuration is treated with maleic anhydride (II), alkanolamines, and compds. having methacryloyl groups and isocyanate groups in that order to give coating materials. Thus, 1000 g I (number-average mol. weight 2020, 60% 1,2-configuration) was treated 5 h with a mixture of II 106.5, antioxidant 2, and xylene 10 g at 195°. The product (1000 g) in 174 g BuOCH <sub>2</sub> CH <sub>2</sub> OH was treated with 60 g ethanolamine at 80° and stirred 5 h at 150°. The above product (955 g) was treated with a reaction product (5 h at 60°) of 143 g 2-hydroxyethyl methacrylate with 174 g TDI, heated 5 h at 80°, and stripped of solvents under reduced pressure. A composition of the above product 70, styrene 30, 1,1-bis(tert-butyperoxy)-3,5,5-trimethylcyclohexane 2, and 8% Mn naphthenate 1 part was applied to a polished sheet plate and baked 30 min at 140° to give a 28-μ coating having pencil hardness F, Erichsen value ≥9 mm, and impact strength (500 g, 0.5-in.-diameter dart) ≥50 cm.					
IC	C08F008-32; C08F008-30; C08F299-00; C09D003-80					
CC	42-10 (Coatings, Inks, and Related Products)					
IT	108-31-6D, reaction products with polybutadiene, ethanolamine, and TDI-hydroxyethyl methacrylate adducts 141-43-5D, reaction products with maleated polybutadiene and TDI-hydroxyethyl methacrylate adducts 868-77-9D, reaction products with maleated polybutadiene, ethanolamine, and TDI 9003-17-2D, maleated, reaction products with ethanolamine and TDI-hydroxyethyl methacrylate adduct 26471-62-5D, reaction products with maleated polybutadiene, ethanolamine, and hydroxyethyl methacrylate					
	RL: TEM (Technical or engineered material use); USES (Uses) (coatings, thermosetting)					
IT	868-77-9D, reaction products with maleated polybutadiene, ethanolamine, and TDI					
	RL: TEM (Technical or engineered material use); USES (Uses) (coatings, thermosetting)					
RN	868-77-9 HCPLUS					
CN	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)					



L83 ANSWER 29 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1979:205924 HCPLUS

DN 90:205924

TI Coating with nonaqueous compositions

IN Komada, Yoshihiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54000041	A2	19790105	JP 1977-65558	19770603 <--
	JP 61013869	B4	19860416		
PRAI	JP 1977-65558	A	19770603 <--		

AB Avoidance of air pollution during coating with nonaq. compns. involves use of organic solvent mixts. containing water-miscible solvents with overall vapor pressure <90 mm at 20° and partial pressures of each solvent <35 mm and scrubbing of the vapors formed during coating and baking with water. For example, a composition from nonaq. polymer dispersion 22.9, melamine resin 9.8, Al paste 1, other pigments 2.5, Et3N 0.8, HOCH2CH2OCHMe2 (I) [109-59-1] 15, BuOH [71-36-3] 5, EtOCH2CH2OAc (II) [111-15-9] 10, EtO(CH2CH2O)2Ac (III) [112-15-2] 15, and solvent naphtha 18 parts was spray coated in a 7-m-long booth connected to a 20-m-long setting room at line speed 3 m/min and exhaust rate 640 m3/min and baked in a 60-m-long oven at 160° and exhaust rate 70 m3/min. A portion (50 m3/min) of the exhaust from the spray booth-setting room was fed to the bottom of a 6-m packed scrubber (0.8 m diameter) to which 200 kg/min water (under circulation from a 3-ton reservoir) was fed from the top. After 320 min operation I, BuOH, II, and III contents were 24.2, 11.4, 18.7, and 14.3 ppm, resp., in the exhaust, 3.5, 6.0, 2.2, and 2.0 ppm, resp., in the effluent from the scrubber, and 750, 160, 460, and 780 ppm, resp., in the circulating water. Similar treatment of 50 m3/min of the exhaust from the baking furnace for 180 min gave I, BuOH, II, and III contents 55.4, 25.9, 42.7, and 32.7 ppm, resp., in the untreated exhaust, 8.0, 13.7, 5.0, and 4.4 ppm, resp., in the effluent from the scrubber, and 700, 150, 450, and 750 ppm, resp., in the circulating water.

IC B05D003-10

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 59

IT 71-36-3, uses and miscellaneous 109-59-1 111-15-9 112-15-2

RL: REM (Removal or disposal); PROC (Process)

(removal of, by water scrubbing, from waste gases from coating process)

IT 109-59-1

RL: REM (Removal or disposal); PROC (Process)

(removal of, by water scrubbing, from waste gases from coating process)

RN 109-59-1 HCAPLUS

CN Ethanol, 2-(1-methylethoxy)- (9CI) (CA INDEX NAME)

i-PrO-CH<sub>2</sub>-CH<sub>2</sub>-OH

L83 ANSWER 30 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1979:12305 HCAPLUS

DN 90:12305

TI Pharmaceutical compositions for producing antiarthritic activity with bis(pyridine)gold(1+) salts

IN Hill, David T.

PA Smithkline Corp., USA

SO U.S., 3 pp.

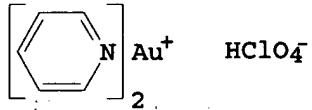
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4098887	A	19780704	US 1977-772033	19770225 <--
PRAI US 1977-772033	A	19770225	<--	
OS MARPAT 90:12305				
GI				



I

AB Bis(pyridine)Au(I) salts are useful in the treatment of rheumatoid arthritis. A solution of 3.1 g thioglycol [111-48-8] in 5 mL EtOH was mixed with a solution of 5 g Au acid chloride in 25 mL H<sub>2</sub>O. The solution was cooled to 0° and 10 mL pyridine was added. Chloro(pyridine)gold [68348-29-8] obtained was filtered after 15 min stirring and 1.33 g AgClO<sub>4</sub> in 20 mL Me<sub>2</sub>CO was added to its solution made by dissolving 2 g in 25 mL each of Me<sub>2</sub>CO and pyridine. After stirring for 1.5 h the solution was filtered, solvent removed under reduced pressure, and the residue was boiled in Me<sub>2</sub>CO. Filtering and recrystg. from pyridine gave bis(pyridine)gold perchlorate (I) [68348-30-1]. Capsules were prepared containing 3 mg I.

IC A61K031-555

INCL 424245000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 27

IT Arthritis

(rheumatoid, bis(pyridine)gold salts in treatment of)

IT 68348-30-1P

RL: PREP (Preparation)

(preparation of, for arthritis treatment)

IT 111-48-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with gold acid chloride)

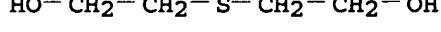
IT 111-48-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with gold acid chloride)

RN 111-48-8 HCPLUS

CN Ethanol, 2,2'-thiobis- (9CI) (CA INDEX NAME)



L83 ANSWER 31 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1977:489977 HCPLUS

DN 87:89977

TI Coating solvents-containing air scrubbing

IN Komada, Yoshihiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

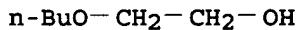
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 51131549	A2	19761116	JP 1975-56341	19750513 <--
PRAI JP 1975-56341	A	19750513	<--	
AB	A painting plant air containing coating solvents (total partial pressure ≤35 torr) from burning of a water-base paint is scrubbed with water, and the spent water is treated to remove the solvents. For example, a painting process air containing 13.7 solvents and 2.7 ppm ammonia from a paint containing water-soluble polyester resin, water-soluble methylated melamine resin, pigments, ethylene glycol Bu ether [111-76-2], BuOH [71-36-3], NH4OH, and water was scrubbed with water to contain 3.3 ppm solvents in the treated air. The spent water containing 985 solvents and 30.1 ppm ammonia was distilled to contain 93.5 solvents and 0.6 ppm ammonia in the bottom, and the condensed water was reused.			
IC	B05D001-00			
CC	59-2 (Air Pollution and Industrial Hygiene) Section cross-reference(s): 42			
IT	Wastewater treatment (distillation, of waste gas treatment effluent from paint plant, for reuse)			
IT	71-36-3, uses and miscellaneous 111-76-2 1336-21-6			
RL	REM (Removal or disposal); PROC (Process) (removal of, in waste gases from painting plant)			
IT	111-76-2 RL: REM (Removal or disposal); PROC (Process) (removal of, in waste gases from painting plant)			
RN	111-76-2 HCPLUS			
CN	Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)			



L83 ANSWER 32 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1977:472710 HCPLUS

DN 87:72710

TI Coating solvents-containing air scrubbing

IN Komada, Yoshihiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 51131551	A2	19761116	JP 1975-56343	19750513 <--
PRAI JP 1975-56343	A	19750513	<--	
AB	A painting plant air containing coating solvents (total partial pressure ≤35 torr) from spraying or baking of a water-base paint is scrubbed with water, and the spent water is treated to remove the solvents. Thus, a water soluble-polyester and -methylated melamine resin painting booth air containing 13.7 solvents (BuOH [71-36-3], ethylene glycol Bu ether [111-76-2]) and 2.7% ammonia was scrubbed with water to contain 3.3 and 0.1 ppm, resp., in the treated air. The spent water containing 985 solvents and 30.1 ppm ammonia was treated with activated C to contain 26 and 31.2 ppm, resp., in the treated water, and the water was reused.			

IC B05D001-00  
 CC 59-2 (Air Pollution and Industrial Hygiene)  
 Section cross-reference(s): 42  
 IT 71-36-3, uses and miscellaneous 111-76-2  
 RL: REM (Removal or disposal); PROC (Process)  
 (air containing, removal of, from painting process)  
 IT 111-76-2  
 RL: REM (Removal or disposal); PROC (Process)  
 (air containing, removal of, from painting process)  
 RN 111-76-2 HCAPLUS  
 CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO—CH<sub>2</sub>—CH<sub>2</sub>—OH

L83 ANSWER 33 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1977:472707 HCAPLUS

DN 87:72707

TI Coating solvents-containing air scrubbing

IN Komada, Yoshihiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51131550	A2	19761116	JP 1975-56342	19750513 <--
PRAI	JP 1975-56342	A	19750513	<--	

AB A painting plant air containing coating solvents (total partial pressure  $\leq$  35 torr) from burning of a water-base paint is scrubbed with water, and the spent scrubbing water is treated to remove the solvents. For example, a paint burning waste gas containing solvents (ethylene glycol Bu ether [111-76-2], BuOH [71-36-3]) 93.3, ammonia 6.1, and HCHO [50-00-0] 5.5 ppm was scrubbed with water in a packed column to contain 19.1, 0.2, and 1.2 ppm, resp., in the treated gas. The spent water containing solvents 4093, ammonia 36, and HCHO 51.3 ppm was distilled to contain 203.3, 0.8, and 47.3, resp., in the bottom, and the condensed water was reused.

IC B05D001-00

CC 59-2 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 42

IT Wastewater treatment

(distillation, of waste gas treatment effluent from paint plant for reuse)

IT 71-36-3, uses and miscellaneous 111-76-2 7664-41-7, uses and miscellaneous

RL: REM (Removal or disposal); PROC (Process)

(removal of, in waste gases from paint plant)

IT 111-76-2

RL: REM (Removal or disposal); PROC (Process)

(removal of, in waste gases from paint plant)

RN 111-76-2 HCAPLUS

CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

n-BuO-CH<sub>2</sub>-CH<sub>2</sub>-OH

L83 ANSWER 34 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1977:472704 HCPLUS

DN 87:72704

TI Coating solvents-containing air scrubbing

IN Komada, Yoshihiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51131553	A2	19761116	JP 1975-54712	19750512 <--
PRAI	JP 1975-54712		19750512	<--	
AB	A painting plant air containing coating solvents (total partial pressure ≤35 torr) from painting or waste gas from water-base paint burning is scrubbed with water to remove the solvents from the air. For example, a waste gas from paint (water-soluble polyester, water-soluble methylated melamine, pigments) burning containing solvents (ethylene glycol Bu ether [111-76-2], BuOH [71-36-3]) 93.3, ammonia 6.1, and HCHO [50-00-0] 5.5 ppm was scrubbed with water in a packed column to contain 19.1, 0.2, and 1.2 ppm, resp. in the treated gas, and the spent water contained 4093, 36, and 51.2 ppm, resp.				
IC	B05C015-00				
CC	59-2 (Air Pollution and Industrial Hygiene) Section cross-reference(s): 42				
IT	50-00-0, uses and miscellaneous 71-36-3, uses and miscellaneous 111-76-2 7664-41-7, uses and miscellaneous				
	RL: REM (Removal or disposal); PROC (Process) (removal of, from waste gases from painting plants)				
IT	111-76-2				
	RL: REM (Removal or disposal); PROC (Process) (removal of, from waste gases from painting plants)				
RN	111-76-2 HCPLUS				
CN	Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)				

n-BuO-CH<sub>2</sub>-CH<sub>2</sub>-OH

L83 ANSWER 35 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1976:508298 HCPLUS

DN 85:108298

TI Safe diacyl peroxide solution compositions

IN Mageli, Orville L.; Noller, David C.; McKellin, Wilbur H.

PA Pennwalt Corp., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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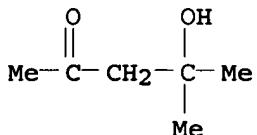
PI US 3956396 A 19760511 US 1969-809443 19690321 <--  
 BE 678389 A 19660926 BE 1966-678389 19660324 <--  
 JP 51041610 B4 19761111 JP 1966-28142 19660504 <--  
 PRAI US 1965-460528 A2 19650601 <--

AB A solvent selected from a list of aliphatic hydrocarbons, ketones, esters, ethers, or alcs. was used for preparing safe solns. of  $[RC(O)O]_2$  [R = Me, Et (I),  $Me_2CH$ ,  $PrCHMe$ ]; the solvents had vapor pressure substantially the same as that of the peroxide present. Thus, 50% aqueous  $H_2O_2$  was treated with propionic anhydride in light naphtha in the presence of aqueous  $Na_2CO_3$  solution to give a naphtha solution containing 26.4% I; this solution was safe as indicated by pressure vessel, impact sensitivity, heat sensitivity, and evaporation tests. Among other solvents used were heptane, hexyl acetate, diisobutyl ketone, and  $HOCH_2CH_2OBu$ . The peroxide solns. prepared are useful as polymerization initiators and crosslinking agents (no data).

IC C07C179-14  
 INCL 260610000D  
 CC 23-10 (Aliphatic Compounds)  
 Section cross-reference(s): 35, 36, 50  
 IT 108-83-8 111-76-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (safety solvent, for diacyl peroxide)  
 IT 103-09-3 106-35-4 108-84-9 110-12-3 112-07-2 123-42-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (safety solvent, for diacyl peroxides)  
 IT 111-76-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (safety solvent, for diacyl peroxide)  
 RN 111-76-2 HCPLUS  
 CN Ethanol, 2-butoxy- (8CI, 9CI) (CA INDEX NAME)

$n-BuO-CH_2-CH_2-OH$

IT 123-42-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (safety solvent, for diacyl peroxides)  
 RN 123-42-2 HCPLUS  
 CN 2-Pentanone, 4-hydroxy-4-methyl- (8CI, 9CI) (CA INDEX NAME)



L83 ANSWER 36 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN  
 AN 1976:166393 HCPLUS  
 DN 84:166393  
 TI Organic solvent removal from waste gases in coating process  
 IN Kawazu, Shinji; Koda, Yoshihiro  
 PA Kansai Paint Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50108328	A2	19750826	JP 1974-12696	19740201 <--
PRAI	JP 1974-12696		19740201 <--		
AB	Coating solvents giving vapors readily scrubbed by water contained ≤10% water-immiscible solvent and water-miscible solvents (solubility ≥0.5% at 20°) with vapor pressure ≤90 mm Hg at 20°, sum of partial pressure of water-miscible solvents being ≤35 mm Hg. For example, a coating composition from butylated amino resin 30, coconut oil-modified alkyd 70, TiO <sub>2</sub> 80, xylene [1330-20-7] 3.3, isopropyl alc. [67-63-0] 33.0, butanol [71-36-3] 12.5, 2-butoxyethyl acetate [112-07-2] 1.3, and 2-ethoxyethanol [110-80-5] 15.8 parts was sprayed to give waste gas containing 100 ppm solvent vapors and scrubbed with 700 kg/min water. The scrubbing time for 90% solvent vapor removal was 6 min.				
IC	C09D; B05D				
CC	42-9 (Coatings, Inks, and Related Products) Section cross-reference(s): 59				
ST	waste gas treatment coating				
IT	67-63-0, uses and miscellaneous 71-36-3, uses and miscellaneous 110-80-5 112-07-2 1330-20-7				
	RL: REM (Removal or disposal); PROC (Process) (removal of, from coating waste gases, by water scrubbing)				
IT	110-80-5				
	RL: REM (Removal or disposal); PROC (Process) (removal of, from coating waste gases, by water scrubbing)				
RN	110-80-5 HCPLUS				
CN	Ethanol, 2-ethoxy- (8CI, 9CI) (CA INDEX NAME)				

EtO—CH<sub>2</sub>—CH<sub>2</sub>—OH

L83 ANSWER 37 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1976:30694 HCPLUS

DN 84:30694

TI Bis (2-hydroxyethyl) terephthalate

IN Taniyama, Osamu

PA Toyobo Co., Ltd., Japan

SO Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

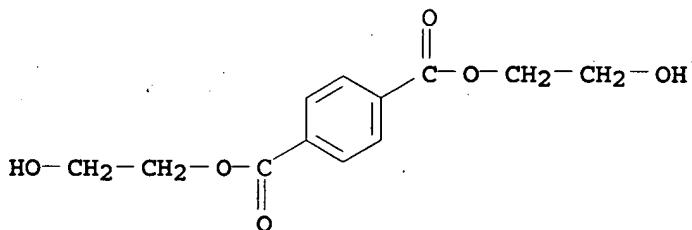
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50023023	B4	19750805	JP 1970-124089	19701229 <--
PRAI	JP 1970-124089	A	19701229 <--		
AB	Bis(2-hydroxyethyl)terephthalate (I) was prepared by introducing ethylene oxide (II) and organic solvent vapors through pressure-reducing pipes into an autoclave, reaction with terephthalic acid (III) under pressure, and removing the products under atmospheric pressure or reduced pressure. Thus, III at 30 kg/hr was treated with 3 molar equivalent MeCOEt and 0.01 molar equiv Pr <sub>2</sub> NH to form a slurry, to which was introduced 1.8 molar equivalent II and the mixture heated at 130° and 15 kg/cm <sup>2</sup> to give I continuously. An apparatus diagram was given.				
IC	C07C				

CC 25-18 (Noncondensed Aromatic Compounds)  
 IT 959-26-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 959-26-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 959-26-2 HCPLUS  
 CN 1,4-Benzenedicarboxylic acid, bis(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)



L83 ANSWER 38 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1974:460506 HCPLUS

DN 81:60506

TI S-Acyl-β-mercaptoproethanol synthesis and its use for albumin determination

IN Kurooka, Shigeru; Yoshimura, Yoshio; Hosoki, Kanoo

PA Dainippon Pharmaceutical Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 49024192	A2	19740304	JP 1972-63480	19720624 <--
PRAI JP 1972-63480	A	19720624	<--	

AB S-Acyl-β-mercaptoproethanol was synthesized by reacting thiolfatty acids with ethylene oxide and used for the determination of albumins. The concentration of albumins was determined by measuring their catalytic activity for the hydrolysis of S-acyl-β-mercaptoproethanol, since the rate of hydrolysis is proportional to the concentration of albumins. Thus, 15 g thiolauroic acid was dissolved in 50 ml anhydrous EtOH and combined with 35 ml anhydrous EtOH containing 15 ml ethylene oxide. The removal of the solvent under reduced pressure and treatment of the residue with petroleum ether yielded S-lauroyl-β-mercaptoproethanol.

INCL 113A2; 16B61; 16B602.7

CC 9-6 (Biochemical Methods)

IT 51097-82-6P

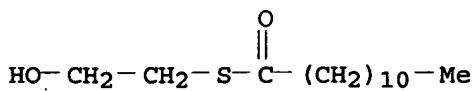
RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for albumin anal.)

IT 51097-82-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for albumin anal.)

RN 51097-82-6 HCPLUS

CN Dodecanethioic acid, S-(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)



L83 ANSWER 39 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1966:491523 HCAPLUS

DN 65:91523

OREF 65:17156g-h,17157a-c

TI Solvent-resistant pressure-sensitive adhesive

IN Horn, Milton B.; Capone, Vincent P.

PA Catalin Corp. of America

SO 4 pp.

DT Patent

LA Unavailable

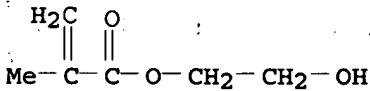
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3269994	-----	19660830	US	19630930 <--
PRAI US		19630930	<--	

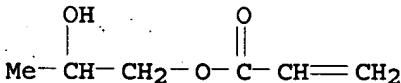
AB A flexible substrate is provided with a tacky pressure-sensitive adhesive coating. The coating is a heat-modified interpolymer of: (1) a monomer containing a single vinyl group of which  $\geq 50\%$  is an acrylic ester of a nontertiary C4-20 aliphatic alc. and (2) a monomer of formula  $\text{CH}_2:\text{C}(\text{X})\text{COOROH}$ , in which X is H or Me and R is a C1-6 alkylene radical. The proportions of (1) and (2) are 70-97:30-3. The proportions are selected to give an interpolymer capable of being a pressure-sensitive adhesive by heat treatment in the absence of curing agents. The interpolymer may also contain 1-15 parts of an alkylated condensation product of HCHO and an aminoplast, such as N',N'',N'''-tris(dimethoxymethyl)melamine per 85-99 parts interpolymer. The interpolymer may be modified by heat treatment at 250-400°F. for 0.5-120 min. The mixture can be polymerized at elevated temps. to form an interpolymer of (1) and (2), which is coated on the flexible substrate. The article is then heated to develop pressure-sensitive adhesivity. For example, an interpolymer was prepared by mixing 200 g. Et acrylate and 206 g. 2-ethylhexyl acrylate with 43 g.  $\beta$ -hydroxyethyl acrylate and 1047 g. Me<sub>2</sub>CO. After addition of 2 g. Bz2O2, the mixture was refluxed for 6 h. After addition of 2 g. addnl. Bz2O2, refluxing was continued for 8 more hrs. After cooling, the liquid had a nonvolatile content of 30.14% by weight and a viscosity of apprx. 500 cpr. A 1.5-mil clear film of poly(ethylene terephthalate) was coated with the above solution, dried, and cured at 300°F. in an oven. The coating was clear, colorless, tacky, and had the desired pressure-sensitive adhesive properties. When placed in Me<sub>2</sub>CO, the interpolymer swelled only slightly after 15 min. It adhered to the substrate and showed no wrinkling. With curing at 125°F., the interpolymer dissolved completely in 1 min. Another pressure-sensitive coating was prepared on poly(ethylene terephthalate) by using 97.5 g. of the above polymer and 2.5 g. N',N'',N'''-tris(dimethoxymethyl)melamine. The coating was cured at 300°F. for 3 min. and tested for adhesion to a number 4 finish stainless-steel plate by a pull test with a 1-in.-wide strip of tape. The samples were immersed in jet-engine fuel for 72 h. prior to the peel test. The plastic strip was peeled off the plate at 180°F. at 12 in./min, and the amount of pull required to maintain this rate of peeling noted. Peeling was clean and showed no signs of splitting. Without the additive, there was some splitting, indicating poor cohesive strength. The 180° pull was 42 oz./in, and there was no sign of edge attack by the jet-engine fuel.

INCL 260086100

CC 48 (Plastics Technology)  
 IT Adhesives  
     (from acrylic ester, hydroxyalkyl acrylates and aminoplasts,  
     pressure-sensitive, solvent-resistant)  
 IT 868-77-9, Ethylene glycol, methacrylate 1188-09-6,  
   1,3-Propanediol, methacrylate  
     (adhesive compns. from alkyl acrylates, aminoplasts and,  
     pressure-sensitive solvent-resistant)  
 IT 14235-49-5, Melamine, N2,N4,N6-tris(dimethoxymethyl)-  
     (adhesive compns. from alkyl acrylates, hydroxyalkyl acrylates and,  
     pressure-sensitive solvent-resistant)  
 IT 96-33-3, Acrylic acid, methyl ester 141-32-2, Acrylic acid, butyl ester  
     (adhesive compns. from aminoplasts, hydroxyalkyl acrylate and,  
     pressure-sensitive solvent-resistant)  
 IT 999-61-1, Acrylic acid, 2-hydroxypropyl ester  
     (adhesive from alkyl acrylates, aminoplasts and, pressure  
     -sensitive solvent-resistant)  
 IT 103-11-7, Acrylic acid, 2-ethylhexyl ester  
     (adhesives compns. from alkyl acrylates, aminoplasts and,  
     pressure-sensitive solvent-resistant)  
 IT 2761-09-3, Methacrylic acid, hydroxypropyl ester  
     (adhesives from alkyl acrylates, aminoplasts and,  
     pressure-sensitive solvent-resistant)  
 IT 9003-20-7, Vinyl acetate polymers  
     (adhesives from aminoplasts, alkyl acrylates and, pressure  
     -sensitive solvent-resistant)  
 IT 140-88-5, Acrylic acid, ethyl ester  
     (adhesives from aminoplasts, hydroxyalkyl acrylate and,  
     pressure-sensitive solvent-resistant)  
 IT 57-13-6, Urea  
     (condensation products, isobutylated, adhesive compns. from alkyl  
     acrylates and, pressure-sensitive solvent  
     -resistant)  
 IT 79-10-7, Acrylic acid  
     (esters, adhesives from aminoplasts, hydroxyalkyl acrylates and,  
     pressure-sensitive solvent-resistant)  
 IT 868-77-9, Ethylene glycol, methacrylate  
     (adhesive compns. from alkyl acrylates, aminoplasts and,  
     pressure-sensitive solvent-resistant)  
 RN 868-77-9 HCPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)



IT 999-61-1, Acrylic acid, 2-hydroxypropyl ester  
     (adhesive from alkyl acrylates, aminoplasts and, pressure  
     -sensitive solvent-resistant)  
 RN 999-61-1 HCPLUS  
 CN 2-Propenoic acid, 2-hydroxypropyl ester (9CI) (CA INDEX NAME)



L83 ANSWER 40 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1962:410478 HCAPLUS  
DN 57:10478  
OREF 57:2068f-i,2069a-c  
TI Lactonization of 3-hydroxy-3,4,4-trimethylpentanoic acid  
AU Burgstahler, Albert W.; Wetmore, David E.  
CS Univ. of Kansas, Lawrence  
SO Journal of Organic Chemistry (1961), 26, 3516-18  
CODEN: JOCEAH; ISSN: 0022-3263  
DT Journal  
LA Unavailable  
OS CASREACT 57:10478  
AB Lactonization of 3-hydroxy-3,4,4-trimethylpentanoic acid (I) was proved to give  $\beta,\beta,\gamma$ -trimethyl- $\beta$ -valerolactone by chemical means. A solution of 3.0 g. of the lactone prepared from I by the action of 5% H<sub>2</sub>SO<sub>4</sub> (method of Newman and Rocher, CA 38, 45665), in 50 ml. dry Et<sub>2</sub>O was added slowly to a well-stirred solution of 1 g. LiAlH<sub>4</sub> in 100 ml. Et<sub>2</sub>O. After 10 min., 5 ml. ethyl acetate was added dropwise, and then 5 ml. of saturated aqueous Na<sub>2</sub>SO<sub>4</sub>. Anhydrous Na<sub>2</sub>SO<sub>4</sub> (20 g.) was added and coagulated solids separated by filtration and washed with Et<sub>2</sub>O. Combined Et<sub>2</sub>O solns. dried over anhydrous MgSO<sub>4</sub>, evaporated, and the residue distilled gave 1.3 g. viscous oil, b<sub>0</sub>.6 112-14°. The infrared spectrum showed strong OH absorption at 2.75-2.9  $\mu$ . This product (0.6 g.) with 2 g. Na<sub>2</sub>CO<sub>3</sub> in 25 ml. H<sub>2</sub>O was oxidized with 25 ml. 6% KMnO<sub>4</sub> in H<sub>2</sub>O at 20-5° 8 hrs., treated with MeOH, and filtered. After extraction with Et<sub>2</sub>O the filtrate was acidified with 6N HCl and reextd. with Et<sub>2</sub>O. Evaporation of the latter exts. gave a viscous oil which was dissolved in 50 ml. Et<sub>2</sub>O, washed with 5% aqueous Na<sub>2</sub>CO<sub>3</sub>, dried over anhydrous Mg<sub>2</sub>SO<sub>4</sub>, and evaporated. The residue gave 110 mg. fine prisms, m. 98-100° (benzenepetr. ether). The acid chloride (3.5 g.) of 2,2,3-trimethyl-3-butenoic acid [prepared by method of Courtot, Bulletin Society Chim. France, 35, 298 (1906)] in 15 ml. dry Et<sub>2</sub>O was added slowly to 0.075 mole diazomethane in 150 ml. dry Et<sub>2</sub>O at 0°. After 24 hrs. at 0° and 12 hrs. at 25° the reaction was completed. Evaporation of solvent under reduced pressure gave an oily diazo ketone which was heated in EtOH with freshly precipitated Ag<sub>2</sub>O at 70° 1 hr., and then refluxed 4 hrs. The resulting clear solution decanted, evaporated under reduced pressure, and residue distilled gave 25% the ethyl ester of 3,3,4-trimethyl-4-pentenoic acid, b<sub>74</sub>5 200-5°. Hydrolysis with 10% alc. KOH gave 3,3,4-trimethyl-4-pentenoic acid (II) m. 140-40.5° (benzene-petr. ether), characterized as the amide by the thionyl chloride-ammonia procedure. A mixed m.p. of this derivative with the amide, m. 104-1° of the solid isomer of  $\beta$ -tert-butylcrotonic acid (III), m. 84-5°, was depressed to 106-29°. The infrared and ultraviolet absorption spectra were also characteristically different. Treatment of apprx. 0.3 g. II with 20 ml. 50% H<sub>2</sub>SO<sub>4</sub> on a steam bath 1 hr. and isolation of the neutral product by extraction with Et<sub>2</sub>O gave 145 mg., m. 99-100° (benzene-petr. ether), and did not depress m.p. of lactone obtained from I. Ethyl 3-hydroxy-2,3,4,4-tetramethylpentanoate (IV), b<sub>0</sub>.6 62-4°, was obtained in 72% yield by the Reformatskii procedure from pinacolone and ethyl  $\alpha$ -bromopropionate. Hydrolysis of IV with 5% aqueous alc. NaOH gave 3-hydroxy-2,3,4,4-tetramethylpentanoic acid (V), m. 108-10° (dilute EtOH), in 81% yield. V (1.0 g.) in 20 ml. benzene was treated with freshly prepared N,N'-diisopropylcarbodiimide at 25° 24 hrs., the precipitate of N,N'-diisopropylurea collected, and the filtrate diluted with petr. ether (40-60°), washed rapidly with cold 5% NaHCO<sub>3</sub>, and dried over anhydrous MgSO<sub>4</sub>. Filtration and concentration under reduced pressure gave  $\alpha,\beta,\gamma,\gamma$ -tetra-methyl- $\beta$ -valerolactone (VI), m. 46-7° (petr. ether at -20°),

in 61% yield. VI heated to 110-30° gave CO<sub>2</sub> and an olefin, b735 104-6, n<sub>20D</sub> 1.4224, λ 12.2 μ (CS)2.

CC 27 (Aliphatic Compounds)

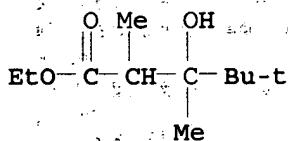
IT 16466-24-3, Valeric acid, 4-hydroxy-3,3,4-trimethyl-, γ-lactone  
 90370-81-3, 4-Pentenoic acid, 3,3,4-trimethyl- 90646-82-5, Valeric acid,  
 3-hydroxy-2,3,4,4-tetramethyl-, β-lactone 90677-45-5, Valeric acid,  
 3-hydroxy-2,3,4,4-tetramethyl- 91140-25-9, 4-Pentenoic acid,  
 3,3,4-trimethyl-, ethyl ester 91243-72-0, Valeric acid,  
 3-hydroxy-2,3,4,4-tetramethyl-, ethyl ester  
 (preparation of)

IT 91243-72-0, Valeric acid, 3-hydroxy-2,3,4,4-tetramethyl-, ethyl ester

(preparation of)

RN 91243-72-0 HCPLUS

CN Pentanoic acid, 3-hydroxy-2,3,4,4-tetramethyl-, ethyl ester (9CI) (CA INDEX NAME)



L83 ANSWER 41 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1961:64929 HCPLUS

DN 55:64929

OREF 55:12358e-g

TI Phosphoroamidothioates

IN Brust, Harry F.

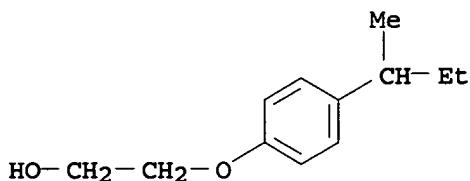
PA Dow Chemical Co.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 2971976		19610214	US	<--	
AB	A series of ROCH <sub>2</sub> CH <sub>2</sub> OPSYOX (where R was a low mol. weight alkylphenyl or halophenyl group; X a low mol. weight alkyl or alkenyl group; Y a low mol. weight alkylamino group (low mol. weight = 5 carbons or less) were prepared by treating the corresponding chloride with MOX (M = alkali metal). Thus, 50 ml. of a MeONa solution was added to O-[2-(2,4,5-trichlorophenoxy)ethyl] N-methylphosphoroamidothioate dispersed in 80 ml. MeOH during 1 hr. at 5-10°, the mixture warmed to room temperature and stirred 16 hrs., NaCl filtered off, and the solvent distilled at reduced pressure to give O-methyl O-[2-(2,4,5-trichlorophenoxy)ethyl] N-methylphosphoroamidothioate, m. 75-6°. Other analogs were similarly prepared. These compds., soluble in common organic solvents and only somewhat soluble in water, were useful as parasiticides and as the toxic constituent in insecticides.					
CC	10E (Organic Chemistry: Benzene Derivatives)					
IT	5349-63-3, Ethanol, 2-(p-sec-butyloxy)- (O-alkyl methylphosphoramidothioates)					
IT	5349-63-3, Ethanol, 2-(p-sec-butyloxy)- (O-alkyl methylphosphoramidothioates)					
RN	5349-63-3 HCPLUS					
CN	Ethanol, 2-[4-(1-methylpropyl)phenoxy]- (9CI) (CA INDEX NAME)					



L83 ANSWER 42 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1960:7140 HCPLUS

DN 54:7140

OREF 54:1478c-i,1479a-i,1480a-b

TI Synthesis of some epoxy vinyl monomers by epoxidation with peracetic acid

AU Frostick, Frederick C., Jr.; Phillips, Benjamin; Starcher, Paul S.

CS Union Carbide Chemicals Co., S. Charleston, WV

SO Journal of the American Chemical Society (1959), 81, 3350-6

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

OS CASREACT 54:7140

AB A number of epoxy vinyl monomers (I), compds. which contain both a polymerizable double bond and an oxirane ring and usable in making cross-linked resins, were prepared by the AcO<sub>2</sub>H epoxidn. method. Studies of the rates of epoxidn. of several different double bonds with AcO<sub>2</sub>H in various solvents were made to show the applicability of selective epoxidn. (All nD at 30°). The following starting unsatd. alc. esters of unsatd. acids were prepared (ester, b.p./mm., nD, % yield given): vinyl 4-pentenoate, 42°/16, 1.4280, 50; vinyl undecylenate, 75-83°/0.08, 1.4450, 60; vinyl oleate, 148-60°/1, 1.4540, 45; vinyl 3-cyclohexenecarboxylate, 74°/10, 1.4678, 63; vinyl 6-methyl-3-cyclohexenecarboxylate, 54°/2.5, 1.4627, 69; allyl crotonate, 83°/5, 1.4416, 88; allyl 4-pentenoate, 41-4°/11, 1.4278, 61; allyl 5-hexenoate, 47°/3, 1.4346, 56; allyl undecylenate, 108-12°/2, 1.4449, 91; allyl oleate, 170°/1, 1.4540, 77; allyl linoleate, 160-2°/0.5, 1.4622, 88; allyl 2-ethyl-2-hexenoate, 86-7°/5, 1.4523, 89; allyl 2-hydroxy-3-butenoate, 47-9°/2, 1.4490, 80; allyl 2-hydroxy-3-pentenoate, 77°/4, 1.4562, 55; allyl 3-cyclohexenecarboxylate, 91°/10, 1.4670, 83; allyl 6-methyl-3-cyclohexenecarboxylate, 85°/6, 1.4632, 81; crotyl acrylate, 55°/15, 1.4363, 74; 2-methyl-2-propenyl acrylate, 68°/50, 1.4310, 82; 2-ethyl-2-hexenyl acrylate, 57°/0.8, 1.4475, 37; 2-cyclopentenyl acrylate, 35-7°/3.5, 1.4651, 63; 3-cyclohexen-1-ylmethyl acrylate, 63°/2, 1.4718, 81; 6-methyl-3-cyclohexen-1-ylmethyl acrylate, 72°/2, 1.4705, 87; 2-ethyl-2-propenyl crotonate, 89-90°/40, 1.4451, 65; crotyl crotonate, 85-7°/25, 1.4495, 47; 2-cyclopentenyl crotonate, 73°/7, 1.4739, 31; 6-methyl-3-cyclohexen-1-ylmethyl crotonate, 112°/4, 1.4777, 90. CH<sub>2</sub>:CMeCH<sub>2</sub>Cl (20 moles) added dropwise with stirring during 5 hrs. to 15 moles CH<sub>2</sub>:CHCH<sub>2</sub>OH (II) and 17 moles powdered KOH at 50-60°, the mixture allowed to stand 60 hrs. at room temperature, diluted with Et<sub>2</sub>O, the Et<sub>2</sub>O solution washed with H<sub>2</sub>O, and fractionated gave 58% CH<sub>2</sub>:CMeCH<sub>2</sub>OCH<sub>2</sub>CH:CH<sub>2</sub>, b<sub>255</sub> 77-8°, nD 1.4181. Similarly was prepared 79% CH<sub>2</sub>:CHCH<sub>2</sub>OCH<sub>2</sub>CH:CHMe, b<sub>300</sub> 92-5°, nD 1.4248. Excess II and 3-cyclohexenemethanol with BF<sub>3</sub>-HgO catalyst gave allyl 3-cyclohexen-1-ylmethyl ether, b<sub>4</sub> 61°, nD 1.4621. Similarly was prepared 74% allyl 2-cyclopentenyl ether, b<sub>53</sub> 74°, nD 1.4550.

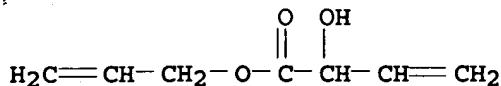
4-Vinyl-1-cyclohexene b305 96°, nD 1.4606-1.4610. The compound to be epoxidized heated to the appropriate temperature, 23-8% AcO2H in EtOAc or Me2CO added dropwise during 1-3 hrs. (large amts. of AcO2H in contact with active double bonds were especially avoided), the solution stirred and cooled or heated as required to maintain the reaction temperature, the reaction continued until complete (iodometric analysis), the mixture added dropwise to a still kettle containing PhEt under reflux at 30-50 mm. pressure (during the addition, solvent, AcOH, unreacted AcO2H, and PhEt were continuously removed at the still-head), and the residual mixture fractionated gave the I. The following I were prepared from diolefins and AcO2H by selective epoxidn. [reaction temperature, time (hrs.), moles AcO2H/olefin, compound obtained, b.p./mm., nD, % yield given]: 40-5%, 6, 0.64/0.42, vinyl 4,5-epoxypentanoate, 72-3°/7, 1.4424, 47; 40-60°, 8, 3.74/2.99, vinyl 10,11-epoxyundecanoate, 101°/0.2, 1.4509, 38; 35°, 6.25, 0.78/0.71, vinyl 9,10-epoxystearate, 163-7°/0.07, 1.4539, 57; 30-5°, 13, 2.2/2.57, vinyl 3,4-epoxycyclohexanecarboxylate, 75-6°/1, 1.4741, 84; 25-30°, 8.5, 2.75/2.20, vinyl 3,4-epoxy-6-methylcyclohexanecarboxylate, 99-102°/5, 1.4691, 71; 40-55°, 6, 0.64/0.42, allyl 4,5-epoxypentanoate, 68-9°/1.5, 1.4430, 65; 40-55°, 9, 1.96/1.57, allyl 5,6-epoxyhexanoate, 66-8°/0.3, 1.4450, 56; 40-55°, 7.5, 3.18/2.54, allyl 10,11-epoxyundecanoate, 125-30°/0.5-1.0, 1.4492-1.4507, 72; 35-40°, 7.67, 1.10/1.00, allyl 9,10-epoxystearate, 180-95°/0.5-1.0, 1.4547, 91; 35-40°, 8.25, 3.43/1.37, allyl 9,10,12,13-diepoxystearate, 210°/1, 1.4614, 87; 40-50°, 9, 1.74/5.23, allyl 2,3-epoxy-2-ethylhexanoate, 91°/3, 1.4415, 33; 40°, 17.25, 1.76/1.55, allyl 3,4-epoxy-2-hydroxybutanoate, 82-90°/1, 1.4590-1.4601, 27; 45-50°, 7, 5.05/4.05, allyl 3,4-epoxy-2-hydroxypentanoate, 108-10°/5, 1.4526, 59; 40-5°, 5, 6.11/4.89, allyl 3,4-epoxycyclohexanecarboxylate, 91-5°/2, 1.4709, 78; 40°, 2.5, 0.799/0.639, allyl 3,4-epoxy-6-methylcyclohexanecarboxylate, 122°/6, 1.4671, 86; 30-55°, 21.5, 293/2.38, 2,3-epoxybutyl acrylate, 46.5°/2, 1.4381, 33; 40-50°, 9, 2.44/2.32, 2,3-epoxy-2-methylpropyl acrylate, 45°/1.5, 1.4380, 62; 40°, 5, 1.61/1.46, 2,3-epoxy-2-ethylhexyl acrylate, 80°/1.5, 1.4431, 38; 30-50°, 9.5, 2.90/2.30, 2,3-epoxycyclopentyl acrylate, 75-7°/2.5, 1.4659-1.4674, 44; 0-3°, 14, 1.15/1.00, 3,4-epoxycyclohexylmethyl acrylate, 105°/2.4, 1.4470, 40; 30-5°, 8, 2.78/2.22, 3,4-epoxy-6-methylcyclohexylmethyl acrylate, 106-8°/1, 1.4760, 76; 70-5°, 6.75, 4.0/20.0, 2,3-epoxypropyl crotonate, 71°/3, 1.4550, 81; 40-5°, 11, 1.80/1.20, 2,3-epoxy-2-methylpropyl crotonate, 66-8°/2, 1.4490, 72; 50-5°, 12.5, 4.74/3.00, 2,3-epoxybutyl crotonate, 67-78°/1-2, 1.4492, 71; 40°, 14, 0.55/0.46, 2,3-epoxycyclopentyl crotonate, 69°/1.5, 1.4738, 30; 30-5°, 10, 6.25/5.00, 3,4-epoxy-6-methylcyclohexylmethyl crotonate, 116°/1, 1.4804, 84; 70°, less than 1 min., 5.0/20, 3,4-epoxy-1-vinylcyclohexane, 61-3°/15, 1.4660-1.4670, 82; 40-5°, 7, 2.00/8.03, allyl 2,3-epoxy-2-methylpropyl ether, 45-7°/9, 1.4252, 75; 35°, 4, 0.615/0.585, allyl 3,4-epoxycyclohexylmethyl ether, 90-2°/3, 1.4670, 66; 25-30°, 6, 2.0/4.0, allyl 2,3-epoxybutyl ether, 112°/150, 1.4273, 66; 25-8°, 24, 0.83/2.38, allyl 2,3-epoxycyclopentyl ether, 78°/10, 1.4624, 73. The following I were prepared from olefin and AcO2H by partial epoxidn. [olefin, reaction temperature, time (hrs.), moles AcO2H/olefin, epoxide, b.p./mm., ND, % yield given]: (CH<sub>2</sub>:CHCH<sub>2</sub>)<sub>20</sub> (III), 50-5°, 6, 2.42/7.26, allyl glycidyl ether, 74-6°/50, 1.4310, 66; (CH<sub>2</sub>:CHCHO<sub>2</sub>CCH<sub>2</sub>)<sub>2</sub>, 50°, 11.5, 1.0/4.0, allyl glycidyl maleate, 138-41°/2.5, 1.4736, 71; CH<sub>2</sub>:CHCH:CH<sub>2</sub>, 30°, 45, 1.0/1.4,

1,2-epoxy-3-butene, b. 68°, 1.4124, 56; CH<sub>2</sub>:CMeCH<sub>2</sub>CH<sub>2</sub>CMe:CH<sub>2</sub>, 30-5°, 2.33, 1.0/3.0, 1,2-epoxy-2,5-dimethyl-5-hexene, 92-4°/5 (m. 71-6°), -, 75; ethylene glycol dicrotonate, 75°, 13, 1.1/1.0, ethylene glycol crotonate 2,3-epoxybutyrate, 133-7°/2, 1.4595, 47. The following absolute second-order rates of reaction of several olefins with AcO<sub>2</sub>H in EtOAc at 25° were reported [olefin and 106 k (l./mole/sec.) given]: AcOCH:CH<sub>2</sub>, <0.1; CH<sub>2</sub>:CHCO<sub>2</sub>Et, 0.1; MeCH:CHCO<sub>2</sub>Et (IV), b. 150°; AcOCH<sub>2</sub>CH:CH<sub>2</sub> (V), 0.669; PrCH:CEtCO<sub>2</sub>Et (VI), 4.18; III, 5.29; styrene (VII), 34.3; Et 3-cyclohexenecarboxylate (VIII), 123; cyclohexene (IX), 283. The following results were reported for the reaction of AcO<sub>2</sub>H in various solvents with several compds. containing double bonds with widely different reactivities toward AcO<sub>2</sub>H [olefin, solvent, temperature, 106 k (l./mole/sec.), heat of activation (kcal.), entropy of activation (e.u.) given]: III, EtOAc, 20°, 3.14, -, -; III, EtOAc, 30°, 8.56, 18.0, 22.2; III, EtOAc, 35°, 13.9, -, -; III, EtOAc, 50°, 55.3, -, -; III, C<sub>6</sub>H<sub>6</sub>, 25°, 38.3, 15.2, 28.1; III, C<sub>6</sub>H<sub>6</sub>, 35°, 88.6, -, -; V, EtOAc, 24°, 0.585, -, -; V, EtOAc, 30°, 1.35, 24.0, 6.2; V, EtOAc, 45°, 9.10, -, -; V, AcOH, 23°, 2.65, -, -; V, AcOH, 30°, 5.70, 19.5, 18.0; V, AcOH, 45°, 24.3, -, -; IX, EtOAc, 0°, 20.2, -, -; IX, EtOAc, 15°, 104, 16.9, 16.2; IX, EtOAc, 20°, 172, -, -; IX, EtOAc, 25°, 283, -, -; IX, AcOH, 15°, 82.2, -, -; IX, AcOH, 25.8°, 2150, 15.6, 18.6; IX, AcOH, 39.6°, 6740, -, -; IV, EtOAc, 30°, 0.262, -, -; IV, EtOAc, 40°, 0.793, 20.1, 22.0; IV, EtOAc, 60°, 5.27, -, -; VIII, EtOAc, 25°, 123, 16.9, 19.7; VIII, EtOAc, 35°, 313, -, -; VIII, AcOH, 15°, 345, -, -; VIII, C<sub>6</sub>H<sub>6</sub>, 0°, 115, 14.2, 20.0; VIII, C<sub>6</sub>H<sub>6</sub>, 15°, 452, -, -; VI, EtOAc, 40°, 19.2, 18.8, 18.5; VI, EtOAc, 60°, 117.5, -, -; VII, EtOAc, 20°, 22.0, -, -; VII, EtOAc, 25°, 34.3, 16.2, 22.6; VII, EtOAc, 30°, 55.3, -, -; VII, EtOAc, 40°, 127, -, -; VII, AcOH, 20.5°, 124, -, -; VII, AcOH, 25°, 186, 13.9, 29.3; VII, AcOH, 25.8°, 188, -, -; VII, AcOH, 40.8°, 574, -, -; VII, C<sub>6</sub>H<sub>6</sub>, 0°, 26.8, 14.3, 27.0; VII, C<sub>6</sub>H<sub>6</sub>, 20°, 162, -, -. AcOCH<sub>2</sub>CH:CH<sub>2</sub> treated with AcO<sub>2</sub>H in EtOAc 5.3 hrs. at 65-70° gave 61% glycidyl acetate, b10 60-60.5°, ND 1.4192. IX and AcO<sub>2</sub>H treated 3.5 hrs. at 25-30° gave 75% IX oxide, b50 54-5°, ND 1.4462. IV was converted to 75% Et 2,3-epoxybutyrate, VI to 79% Et 2,3-epoxy-2-ethylhexanoate, VIII to 84% Et 7-oxabicyclo[4.1.0]-3-heptenecarboxylate, b3 85°, ND 1.4568, VII to 60-75% VII oxide, b10 75°, ND 1.5300.

CC 10G (Organic Chemistry: Heterocyclic Compounds)  
 IT 96-09-3, Benzene, (epoxyethyl)- 100-40-3, Cyclohexene, 4-vinyl-  
 106-92-3, Propane, 1-(allyloxy)-2,3-epoxy- 108-05-4, Vinyl acetate  
 286-20-4, 7-Oxabicyclo[4.1.0]heptane 930-22-3, 1-Butene, 3,4-epoxy-  
 4033-02-7, Ether, allyl 2-methylpropenyl 15359-10-1, 1-Hexene,  
 5,6-epoxy-2,5-dimethyl- 45719-86-6, Butane, 1-(allyloxy)-2,3-epoxy-  
 55553-02-1, Propane, 1-(allyloxy)-2,3-epoxy-2-methyl- 58401-78-8, Ether,  
 allyl 2-butenyl 63163-50-8, Ether, allyl 2-cyclopenten-1-yl  
 98272-42-5, 3-Butenoic acid, 2-hydroxy-, allyl ester  
 98558-66-8, 3-Pentenoic acid, 2-hydroxy-, allyl ester  
 99180-69-5, Ether, allyl 3-cyclohexen-1-ylmethyl 99181-40-5,  
 7-Oxabicyclo[4.1.0]heptane, 3-[(allyloxy)methyl]- 100052-77-5,  
 2-Hexenoic acid, 2-ethyl-, allyl ester 100249-25-0, 6-  
 Oxabicyclo[3.1.0]hexane, 2-(allyloxy)- 105105-80-4, 5-Hexenoic acid,  
 allyl ester 106196-76-3, Linoleic acid, allyl ester  
 (preparation of)  
 IT 98272-42-5, 3-Butenoic acid, 2-hydroxy-, allyl ester  
 98558-66-8, 3-Pentenoic acid, 2-hydroxy-, allyl ester  
 (preparation of)

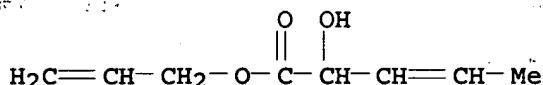
RN 98272-42-5 HCAPLUS

CN 3-Butenoic acid, 2-hydroxy-, allyl ester (6CI) (CA INDEX NAME)



RN 98558-66-8 HCAPLUS

CN 3-Pentenoic acid, 2-hydroxy-, allyl ester (6CI) (CA INDEX NAME)



L83 ANSWER 43 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1956:16282 HCAPLUS

DN 50:16282

OREF 50:3381a-i,3382a-i,3383a

TI Rearrangement of 1,2,5-triols by acids

AU Mondon, Albert

CS Univ. Kiel, Germany

SO Ann. (1954), 585, 43-67

DT Journal

LA Unavailable

OS CASREACT 50:16282

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 47, 1663a. Powdered 1-(1-hydroxycyclohexyl)-4-hydroxy-4-methylpent-2-yne (25 g.) added with strong stirring to an ice-cold solution of 1.25 g.  $\text{HgSO}_4$  in 125 cc. 85%  $\text{HCO}_2\text{H}$  during 20 min., stirring and cooling continued 0.5 hr., the mixture filtered, the filtrate poured into saturated  $(\text{NH}_4)_2\text{SO}_4$ , the oil extracted with  $\text{C}_6\text{H}_6$ , the extract washed with  $\text{NaOH}$  solution and  $\text{H}_2\text{O}$ , the solvent evaporated, the crude crystalline residue (I) dissolved in  $\text{C}_5\text{H}_12$ , and the solution passed through a short column of alumina gave 24.9 g.

1-(1-hydroxycyclohexyl)-4-hydroxy-4-methylpentan-3-one (II), m.

65-6°; 2,4-dinitrophenylhydrazones,  $\text{C}_{18}\text{H}_{26}\text{N}_4\text{O}_6$ , m. 152°,

$\text{C}_{18}\text{H}_{24}\text{N}_4\text{O}_5$ , m. 134°. Distillation of 38.5 g. I gave 33 g.

5-spirocyclohexyl-2-( $\alpha$ -hydroxyisopropyl)-4,5-dihydrofuran (III),

b1.5 103-5°, crystallizing slowly in air to give II. III added 1 mole of

$\text{H}$  to form the 2,3-dihydro derivative (IV), b0.2 66-8°,  $\text{nD}_{21}$  1.4703.

The residue of distillation of I was a crystalline solid (V),  $\text{C}_{24}\text{H}_{40}\text{O}_4$ , m.

181°, formed by loss of 2 moles of  $\text{H}_2\text{O}$  from 2 moles of the

hemiketal form of II. Degradation of II with  $\text{NaBiO}_3$  yielded  $\text{Me}_2\text{CO}$  and

$\lambda$ -(1-hydroxycyclohexyl)propionic acid lactone. II (5.93 g.) in

$\text{MeOH}$  with 2 cc. 4N  $\text{NaOH}$  shaken for 3 hrs. with  $\text{H}$  and  $\text{Pt}$  gave 5.22 g.

1-(1-hydroxycyclohexyl)-4-methyl-3,4-dihydroxypentane (VI), m.

116°. Reduction of 6.15 g. II in  $\text{MeOH}$  containing 1 cc. 10N  $\text{NaOH}$  with

Raney Ni gave 89% of an unstable form of VI, m. 96°, changing to

116° on repeated crystallization from  $\text{EtOAc-pétr. ether}$ . II (40.76 g.)

reduced with  $\text{LiAlH}_4$  yielded 25.2 g. VI. VI (121 mg.) in 15 cc. absolute  $\text{CHCl}_3$

mixed with 248 mg.  $\text{Pb}(\text{OAc})_4$  in absolute  $\text{C}_6\text{H}_6$ , allowed to stand 30 min.,

shaken 3 times with 10-cc. portions of  $\text{H}_2\text{O}$ , the  $\text{CHCl}_3\text{-C}_6\text{H}_6$  dried and

evaporated, the residue of thin oil (73 mg.) allowed to crystallize, and the

crystals sublimed gave bis{2-[5-(spirocyclohexyl)tetrahydrofuran]}  
ether, m. 89°. VI (5 g.) kept in 12.5 cc. pyridine with 2.5 cc.

$\text{Ac}_2\text{O}$  for 12-15 hrs., and the excess  $\text{Ac}_2\text{O}$  and pyridine distilled off at 12 mm.

gave 5.75 g. 3-acetate (VII) b0.06 150°, m. 89-91°. VI (5 g.), 5 cc. Ac2O, and 2.5 g. KOAc in 50 cc. glacial HOAc heated overnight at 130°, the solvent evaporated at reduced pressure, and the residue worked up yielded 2.5 g. 1-cyclohexen-1-yl-4-methyl-3-acetoxy-4-hydroxypentane (VIII), b0.4 120°. Saponification of VIII with KOH in MeOH gave the unsatd. glycol, b0.2 112°, which was reduced (H, Pt) to 1-cyclohexyl-4-methyl-3,4-dihydroxypentane (IX), prisms, m. 62°. IX dissolved in 10 cc. ice-cold concentrated H2SO4, poured onto ice after 1 hr. and worked up gave an oil; 2,4-dinitrophenylhydrazone (X), m. 99°. VI kept in 85% H3PO4 for 14 hrs. and worked up gave an impure cyclization product, approx. C12H20O, b12 101-5°. VII (5 g.) kept in 50 cc. 85% H3PO4 at room temperature for 4 hrs., then poured onto 100 g. of ice and worked up gave 4.36 g. VIII. VII (10 g.) kept in 100 cc. 85% H3PO4 at room temperature for 4 hrs., then heated at 80° for 4 hrs., poured onto ice, and worked up gave 7.66 g. of a thin oil, which on repeated distillation gave 2-isopropenyl-5-spirocyclohexyltetrahydrofuran (XI), b14 98-103° (semicarbazone, m. 92-4°), and 2-isopropylidene-5-spirocyclohexyltetrahydrofuran (XII), b14 105-11° [semicarbazone (XIII), m. 99-102°]. XI absorbs 1.14 mole of H, and XI and XII give identical reduction products. XIII (0.8 g.) in a solution of 3 g. Na in 50 cc. alc. autoclaved 14 hrs. at 220°, cooled, diluted with H2O, extracted with Et2O, the Et2O solution washed with H2O, dilute H2SO4, dilute Na2CO3, and H2O, dried, and evaporated and the residue sublimed gave 0.62 g. 1-(1-hydroxycyclohexyl)-3-hydroxy-4-methylpentane (XIV), m. 81°. Freshly distilled XII (139 mg.) in CHCl3 treated with 1 mole BzO2H for 12 hrs., the mixture washed with dilute NaOH and H2O, the CHCl3 evaporated, the residue shaken 12 hrs. with 10 cc. H2O and 3 drops 20% HClO4, the mixture extracted with petr. ether, and the extract washed, dried and evaporated gave V and II. With excess BzO2H XII (198 mg.) used 1.9 atoms O; the crude product shaken overnight with 5 cc. H2O, 1.5 cc. MeOH, and 0.1 cc. 20% HClO4 and worked up gave an oil, b10 130°; 2,4-dinitrophenylhydrazone (XV), C18H22N4O5, red needles, m. 201°. XIV was also derived from treatment of III with excess BzO2H. II (6.2 g.) heated 2 hrs. at 80° with 60 cc. anhydrous HCO2H, the mixt cooled, poured into H2O and extracted with Et2O, and the extract washed neutral, dried, and evaporated gave a viscous oil, b0.25 110°, from which XIV was prepared and purified by chromatography. Powdered VI (10 g.) added during 15 min. with stirring to 100 cc. ice-cold concentrated H2SO4, the solution kept 1 hr. and poured onto 300 g. ice, the oil taken up in Et2O, washed neutral, dried and evaporated gave 7.3 g. of oil, b1 63°; semicarbazone, separated by chromatography on alumina into two fractions (XVI) and (XVII), both m. 96-100°. Acid hydrolysis of XVI and XVII gave two compds., C12H20O, b13 103.5°, nD22 1.4745, and b13 100.5°, nD22 1.4712, resp., each containing approx. 20% 1-(1-hydroxycyclohexyl)-3-oxo-4-methylpentane. Reduction of 1.25 g. each of XVI and XVII with 4.5 g. Na in 75 cc. absolute EtOH gave XIV. Crystalline VI (10 g.) in 100 cc. glacial HOAc heated at 130° for 38 hrs., the cooled mixture poured into 300 cc. H2O and extracted with four 150-cc. portions of C6H6, the combined exts. washed with dilute NaOH and H2O and distilled gave 4.7 g. VIII, b0.08 96-109°, nD19 1.4790, and 5.2 g. of a fraction, b0.08 54-60°, nD19 1.4708, which freed of ketonic material with Girard reagent, yielded 4.5 g. IV. VI (2 g.) heated 10 hrs. in 40 cc. absolute C6H6 with 25 mg. iodine, the solution cooled and washed with dilute NaHSO3 gave 1.4 g. IV. IV(4.1 g.) refluxed 1 hr. in 70 cc. pyridine and 20 cc. POC13, cooled, and poured onto 350 g. ice and 350 cc. 2N HCl, the oil extracted with Et2O, and the extract washed, dried, and distilled gave 3.18 g. XI. XI (2.9 g.) refluxed 2 hrs. with 0.5 g. MeC6H4SO3H in 50 cc. C6H6 and worked up gave 2.3 g. 1-(1-cyclohexen-1-yl)-4-methylpentan-3-one (XVIII), b12 115-9°, nD20 1.4752; semicarbazone, m. 110°,

$\lambda$  227.5 m $\mu$  ( $\epsilon$  10,200) (MeOH); 2,4-dinitrophenylhydrazone (XIX), m. 91.5°,  $\lambda$  362.5 m $\mu$  ( $\epsilon$  18,450) (MeOH).

VI (5 g.) in 100 cc. 20% H<sub>2</sub>SO<sub>4</sub> stirred strongly at 125° for 2 hrs. and worked up gave 3.8 g. XVIII. XVIII with excess BzO<sub>2</sub>H took up 2 atoms O to give an epoxide ester, which on sapon, yielded a 1,2-glycol acid, b10 120°. XVIII in MeOH took up 1 mole of H to give

1-cyclohexyl-4-methylpentan-3-one, b10 111°, nD<sub>20</sub> 1.4592;

2,4-dinitrophenylhydrazone, identical with X. XIX (0.6 g.), 5 cc. AcCO<sub>2</sub>H, 3 cc. glacial HOAc, 3 cc. CHCl<sub>3</sub>, 0.6 cc. H<sub>2</sub>O, and 0.06 cc. concentrated HCl heated together 15 hrs. at 60°, decanted from the precipitate, diluted with Et<sub>2</sub>O, washed with H<sub>2</sub>O, dilute NaOH, and H<sub>2</sub>O, the solvent evaporated, and the residue crystallized by scratching, then sublimed gave a saturated Me ketone, C<sub>15</sub>H<sub>24</sub>O<sub>4</sub>, m. 116°,  $\lambda$  280 m $\mu$  ( $\epsilon$  25)

(hexane); 2,4-dinitrophenylhydrazone, m. 182°. To a solution of 18.6 g. (1-hydroxycyclohexyl)acetylene in 50 cc. absolute Et<sub>2</sub>O containing a small amount of CuCl was added slowly 240 cc. 2N EtMgBr solution, the mixture stirred overnight on a water bath, 15 cc. iso-PrCHO in 50 cc. absolute Et<sub>2</sub>O added dropwise, stirring continued 6 hrs., and the mixture worked up to give 80%

1-(1-hydroxycyclohexyl)-3-hydroxy-4-methylpent-1-yne (XX), b10 118-119°, fine needles, m. 76°. Reduction (Pt, H) of XX gave XIV. XX (5.9 g.) in 10 cc. Me<sub>2</sub>CO oxidized with a mixture of 2.6 g. CrO<sub>3</sub>, 7.5 cc. H<sub>2</sub>O, and 2.2 cc. concentrated H<sub>2</sub>SO<sub>4</sub> gave 4 g. 1-(1-hydroxycyclohexyl)-4-methylpent-1-yn-3-one (XXI), b0.9 113-14°, nD<sub>20</sub> 1.4922,  $\lambda$  217.5 m $\mu$  ( $\epsilon$  4040) (hexane); 2,4-dinitrophenylhydrazone, m. 125°,  $\lambda$  367.5 m $\mu$  ( $\epsilon$  9240) (MeOH). XXI (3.31 g.)

dissolved in EtOAc took up more than 2 moles of H (Pt) to give 0.71 g. XIV and 2 g. XII. Freshly distilled XII in EtOAc absorbs 1 mole H (Pt). XII (0.7 g.) heated at 120° for 2 hrs. with 10 cc. 20% H<sub>2</sub>SO<sub>4</sub> gave 0.5 g. product, b11 115-16°, nD<sub>19</sub> 1.4783; 2,4-dinitrophenylhydrazone, identical with XIX.

VII (9.54 g.) in 140 cc. absolute pyridine treated with 40 cc. POCl<sub>3</sub>, heated for 1 hr. more and worked up gave 6.6 g. 1-(1-cyclohexen-1-yl)-4-methyl-3-acetoxy-pent-4-ene (XXII), b12 136°, nD<sub>22</sub> 1.4752, and a small amount of XVIII. Crude XII saponified with MeOH-KOH gave 1-(1-cyclohexen-1-yl)-4-methyl-3-hydroxy-pent-4-ene (XXIII), b10 128-31°, nD<sub>22</sub> 1.4926. XXIII absorbs 2 moles of H (Pt) to give 1-cyclohexyl-3-hydroxy-4-methylpentane (XXIV), b10 123°, nD<sub>20</sub> 1.4667; phenylurethan, long needles, m. 58-68°. XXIV (0.38 g.) in 1 cc. Me<sub>2</sub>CO oxidized with a solution of 160 mg. CrO<sub>3</sub> and 0.22 cc. concentrated H<sub>2</sub>SO<sub>4</sub> in 0.75 cc. H<sub>2</sub>O gave 0.32 g. fragrant oil;

2,4-dinitrophenylhydrazone, not depressed in m.p. with X. XXIII (5 g.) in 50 cc. absolute C<sub>6</sub>H<sub>6</sub> mixed with 3 cc. BF<sub>3</sub>-Et<sub>2</sub>O and kept 12 hrs. at room temperature, washed neutral with H<sub>2</sub>O, dried, and distilled gave 1.6 g. viscous oil (XXV), b10 132-42°, nD<sub>17</sub> 1.4841 [2,4-dinitrophenylhydrazone (XXVI), m. 138°,  $\lambda$  365 m $\mu$  ( $\epsilon$  12,600) (MeOH)], a mixture of

3-hydroxy-2-methylspiro[5.5]undec-1-ene (XXVII) and 3-oxo-2-methylspiro[5.5]undecane, separated by Girard reagent. XXV absorbed 0.8 mole of H and XXVI was prepared from the product. Reduction (Pt) and CrO<sub>3</sub> oxidation of XXVII gave a product from which XXVI was prepared

CC 10 (Organic Chemistry)

IT 699-61-6, Cyclohexanepropionic acid, 1-hydroxy-,  $\gamma$ -lactone

40435-64-1, 3-Pentanone, 1-cyclohexyl-4-methyl-

65081-71-2,

1-Pentyn-3-one, 1-(1-hydroxycyclohexyl)-4-methyl-

68426-06-2,

Cyclohexanepropanol,  $\alpha$ -isopropyl-

136175-32-1,

Cyclohexanepropanol, 1-hydroxy- $\alpha$ -isopropyl-

343771-06-2,

Spiro[5.5]undecan-3-one, 2-methyl-

408523-49-9, 3-Pentanone,

4-hydroxy-1-(1-hydroxycyclohexyl)-4-methyl-

412275-51-5,

1-Oxaspiro[4.5]decane, 2-isopropenyl-

854708-70-6, Cyclohexanepropanol,

$\alpha$ -isopropyl-, carbanilate

854712-96-2, 1-Pentyn-3-ol,

1-(1-hydroxycyclohexyl)-4-methyl-

854712-96-2, Cyclohexanol,

1-(3-hydroxy-4-methyl-1-pentynyl)-

854725-29-4, 1-Cyclohexene-1-

propanol,  $\alpha$ -isopropenyl-, acetate 854725-31-8,  
 1-Cyclohexene-1-propanol,  $\alpha$ -isopropenyl- 855361-87-4,  
 2,3-Pantanediol, 5-(1-cyclohexen-1-yl)-2-methyl- 855365-31-0,  
 2,3-Pantanediol, 5-cyclohexyl-2-methyl- 855381-20-3, 3-Pantanone,  
 1-(1-hydroxycyclohexyl)-4-methyl- 855398-21-9, 1-Oxaspiro[4.5]decane,  
 2-isopropylidene- 855398-55-9, 1-Oxaspiro[4.5]dec-2-ene-2-methanol,  
 $\alpha,\alpha$ -dimethyl- 855398-59-3, 1-Oxaspiro[4.5]decane-2-methanol,  
 $\alpha,\alpha$ -dimethyl- 855398-61-7, 1-Oxaspiro[4.5]decane,  
 2,2'-oxybis- 855398-61-7, Ether, bis(1-oxaspiro[4.5]dec-2-yl)  
 855716-47-1, 1-Pentyn-3-one, 1-(1-hydroxycyclohexyl)-4-methyl-,  
 2,4-dinitrophenylhydrazone 855736-88-8, 3-Pantanone,  
 1-cyclohexyl-4-methyl-, 2,4-dinitrophenylhydrazone 855742-39-1,  
 3-Pantanone, 4-hydroxy-1-(1-hydroxycyclohexyl)-4-methyl-,  
 2,4-dinitrophenylhydrazone 855748-22-0, 2,3-Pantanediol,  
 5-(1-cyclohexen-1-yl)-2-methyl-, 3-acetate 860420-29-7,  
 Spiro[5.5]undecan-3-one, 2-methyl-, 2,4-dinitrophenylhydrazone  
 860709-28-0, 7,9,12,21-Tetraoxatetraspiro[5.1.2.1.5.2.2.2]tetracosane,  
 10,10,22,22-tetramethyl- 860712-28-3, Spiro[5.5]undec-1-en-3-ol,  
 2-methyl-

(preparation of)

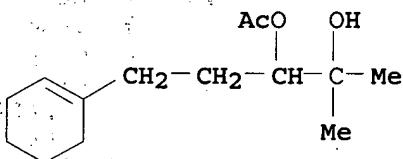
IT 855365-28-5, 2,3-Pantanediol, 5-(1-hydroxycyclohexyl)-2-methyl-,  
 3-acetate 855365-29-6, 2,3-Pantanediol, 5-(1-hydroxycyclohexyl)-2-methyl-  
 (rearrangements of)

IT 855748-22-0, 2,3-Pantanediol, 5-(1-cyclohexen-1-yl)-2-methyl-,  
 3-acetate

(preparation of)

RN 855748-22-0 HCPLUS

CN 2,3-Pantanediol, 5-(1-cyclohexen-1-yl)-2-methyl-, 3-acetate (5CI) (CA  
 INDEX NAME)

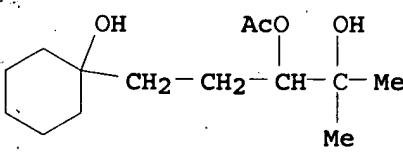


IT 855365-28-5, 2,3-Pantanediol, 5-(1-hydroxycyclohexyl)-2-methyl-,  
 3-acetate

(rearrangements of)

RN 855365-28-5 HCPLUS

CN 2,3-Pantanediol, 5-(1-hydroxycyclohexyl)-2-methyl-, 3-acetate (5CI) (CA  
 INDEX NAME)



L83 ANSWER 44 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1955:47996 HCPLUS

DN 49:47996

OREF 49:9299i, 9300a-b

TI Sulfonation products from ethers

IN Orthner, Ludwig; Platz, Carl; Horst, Karl; Nelles, Johannes; Keppler, Helmut

PA Farberke Hoechst AG vorm. Meister Lucius &amp; Bruning

DT Patent

LA Unavailable

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI DE 917602	-----	19540906	DE	---
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AB SO<sub>3</sub>H radicals are introduced in the usual manner into ethers (I) of the general formula ROR'OR'', where R and R'' indicate alkyl radicals having 6-9 C atoms and R' an alkylene group with 3 C atoms substituted by OH, NH<sub>2</sub>, NH, or Cl, to give surface-active sulfonation products, used as assistants in the textile, leather, and paper industries as leveling, wetting, emulsifying, and washing agents. Suitable I are the 1,3-bis(2-ethylhexyl) glycerol ether (II) (from epichlorohydrin and BuCH(Et)CH<sub>2</sub>OH in the mole ratio 1:2); the compound C<sub>6</sub>H<sub>13</sub>O(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>OC<sub>6</sub>H<sub>13</sub> (from Cl(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>Cl and Na isohexyloxide in the mole ratio 1:2); and dioctyl 2-bromo-1,3-propanediol ether (III). Thus, a solution of 45 parts II in 80 parts Et<sub>2</sub>O is treated with 17 parts by weight ClSO<sub>3</sub>H for about 4-5 hrs. at -5° with stirring. The clear solution is poured onto ice and neutralized with aqueous Na<sub>2</sub>CO<sub>3</sub> solution. The sulfonate BuCH(Et)CH<sub>2</sub>OCH<sub>2</sub>CH(OSO<sub>3</sub>Na)CH<sub>2</sub>OCH<sub>2</sub>CH(Et)Bu is a valuable wetting agent for cotton. The readily water-soluble sulfonate C<sub>8</sub>H<sub>17</sub>OCH<sub>2</sub>CH(OSO<sub>3</sub>Na)CH<sub>2</sub>OCH<sub>2</sub>H<sub>17</sub> is obtained by pressure-heating III with Na<sub>2</sub>SO<sub>3</sub> in anhydrous EtOH at 150-60°.

INCL 120; 23-01

CC 27 (Fats, Fatty Oils, Waxes, and Detergents)

IT Textiles

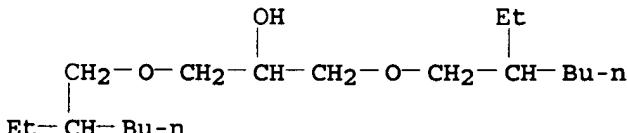
(assistants and auxiliary products for, sulfonation products from ethers)

IT 59068-03-0, 2-Propanol, 1,3-bis(2-ethylhexyloxy)- 62174-79-2, 2-Propanol, 1,3-bis(2-ethylhexyloxy)-, hydrogen sulfate Na salt (preparation of)

IT 59068-03-0, 2-Propanol, 1,3-bis(2-ethylhexyloxy)- (preparation of)

RN 59068-03-0 HCPLUS

CN 2-Propanol, 1,3-bis[(2-ethylhexyl)oxy]- (6CI, 7CI, 9CI) (CA INDEX NAME)



L83 ANSWER 45 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1955:35814 HCPLUS

DN 49:35814

OREF 49:6863d-i,6864a-c

TI Phosphatide analogs. The synthesis of glycollecithins and bis-(glycol)-phosphatidic acids

AU Baer, Erich

CS Univ. Toronto

SO Journal of the American Chemical Society (1953), 75, 5533-9

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

OS CASREACT 49:35814

AB cf. C.A. 47, 11285d. A new class of phosphatides and a generally applicable method for the synthesis of its members is described. The new phosphatides, which are analogs of both the lecithins and lyssolecithins, and which differ from these substances only in that they contain glycol instead of glycerol, are called glycollecithins. They possess neither positional- nor stereoisomers. The synthesis of 2 representative members of the glycollecithins, stearoyl- (I) and palmitoylglycollecithin (II), is described and their infrared spectra and x-ray powder diffraction patterns are reported. I and II show strong hemolytic activity.  $(CH_2OH)_2$  (124.0 g.), 31 cc. HCONMe<sub>2</sub>, and 320 cc. CHCl<sub>3</sub> at -15°, 17.8 ml. pyridine in 80 cc. CHCl<sub>3</sub> and 60.6 g. stearoyl chloride in 400 cc. CHCl<sub>3</sub> added simultaneously during 15 min., the mixture stirred 45 min. without the bath, let stand until 2 layers formed, the lower layer filtered, evaporated to dryness (bath temperature 30-5°), the solid mixture of mono- (III) and distearoyl glycol (IV) stirred 15 min. with 520 cc. 99% EtOH at 40°. IV centrifuged off, the decanted solution cooled to room temperature, treated with 25 cc. water, centrifuged, the decanted solution treated during 10 min. with 240 cc. water, and let stand 1 hr. yielded 52.8 g. III, m. 59.5-60.5°. A similar procedure yielded 41.5 g. monopalmitoyl glycol (V), m. 52-3°. III (16.4 g.), 10.5 g. PhOPOCl<sub>2</sub>, 55 cc. CHCl<sub>3</sub>, and 150 cc. petr. ether (b. 60-80°) at 20° treated dropwise during 3 hrs. with 4.4 g. pyridine in 75 cc. petr. ether, the mixture let stand 15 min., the solvents evaporated in vacuo (bath temperature 25-30°), the residue in 140 cc. CHCl<sub>3</sub> treated with 8.8 g. pyridine and 9.1 g. powdered choline chloride, stirred 3 days, filtered, the filtrate concentrated to dryness in vacuo (bath temperature slowly raised to 40°), the residue triturated with 150 cc. petr. ether and centrifuged (the process repeated 3 times), dissolved in 180 cc. 99% EtOH, the solution added during 5 min. to 30.0 g. NH<sub>4</sub> reineckate and 30.0 g. anhydrous Na<sub>2</sub>CO<sub>3</sub> in 1350 cc. water, the precipitate filtered, dried, triturated with EtOAc, centrifuged (the process repeated 3 times), the solid extracted with boiling EtOAc, the combined exts. concentrated in vacuo to 110 cc., the concentrate treated gradually with 180 cc. petr. ether (b. 35-60°), the precipitate centrifuged, triturated with 100 cc. 99% EtOH, centrifuged, again treated with 50 cc. EtOH, and dried in vacuo yielded 10.3 g. stearoylglycollecithin Ph ester reineckate (VI), m. 144.5-5°. The palmitoyl compound (VII) m. 141-2°. VI (8.89 g.) in 175 cc. 1:1 EtOH-Me<sub>2</sub>CO treated rapidly with 1.56 g. Ag<sub>2</sub>SO<sub>4</sub> in 135 cc. hot water, the mixture stirred 10 min., the Ag salt centrifuged, the supernatant liquid and washings concentrated to dryness in vacuo (bath temperature 35-45°), the residue kept in vacuo at 45° until it solidified, and filtered in 80 cc. Me<sub>2</sub>CO yielded 6.11 g. stearoylglycollecithin Ph ester sulfate (VIII). VII (8.61 g.) by the same process yielded 5.67 g. of the palmitoyl compound (IX). VIII (6.37 g.) in 100 cc. 99% EtOH containing 1.34 g. Adams catalyst hydrogenated 15-20 min. at room temperature and 50 cm. water pressure, CHCl<sub>3</sub> added to dissolve the lecithin, the mixture centrifuged, the solution and washings added to 1.4 g. Ba(OAc)<sub>2</sub>·H<sub>2</sub>O in 10 cc. water, the mixture stirred 5 min., centrifuged, the solution concentrated to dryness in vacuo (bath temperature 30-5°), and the residue centrifuged in 50 cc. Me<sub>2</sub>CO yielded 4.96 g. I, started to sinter at about 70°, formed droplets at about 80°, and formed a meniscus at 239-40°. IX (6.08 g.) yielded 4.73 g. II, sintered at 68°, formed droplets at 80°, and coalesced at 242-3°. The reineckates and CdCl<sub>2</sub> compds. of I and II were prepared I (3.28 g.) in 30 cc. CHCl<sub>3</sub> treated simultaneously during 1 hr. with 1.06 g. PhOPOCl<sub>2</sub> and 0.95 cc. pyridine each in 15 cc. CHCl<sub>3</sub>, the mixture let stand 24 hrs. at room temperature, concentrated in vacuo (bath temperature 25-35°), the residue extracted with four 50-cc. portions of boiling petr. ether (b. 35-60°), and the combined exts. concentrated to

dryness in vacuo yielded 2.51 g. distearoyl bis-glycol) phosphoric acid Ph ester (X), m. 59-60°. IX (3.00 g.) yielded 2.50 g. dipalmitoyl compound (XI), m. 51.5-2.5°. X (4.77 g.) in 95 cc. CHCl<sub>3</sub> and 20 cc. 99% EtOH hydrogenated 1 hr. over 0.91 g. Adams catalyst at 40-50 cm. water pressure, the solvents evaporated in vacuo, and the residue triturated with EtOH yielded 3.07 g. distearoylbis(glycol)phosphoric acid, m. 92.5-3.5°. XI (4.43 g.) yielded 3.01 g. of the dipalmitoyl compound, m. 89.0-90.5°.

CC 10 (Organic Chemistry)

IT 111-60-4, Stearic acid, 2-hydroxyethyl ester 4219-49-2,  
Palmitic acid, 2-hydroxyethyl ester  
(and derivs. related to lecithins and phosphatidic acids)IT 111-60-4, Stearic acid, 2-hydroxyethyl ester 4219-49-2,  
Palmitic acid, 2-hydroxyethyl ester  
(and derivs. related to lecithins and phosphatidic acids)

RN 111-60-4 HCPLUS

CN Octadecanoic acid, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)



RN 4219-49-2 HCPLUS

CN Hexadecanoic acid, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)



L83 ANSWER 46 OF 46 HCPLUS COPYRIGHT 2006 ACS on STN

AN 1946:20055 HCPLUS

DN 40:20055

OREF 40:3916d-i

TI Ester polymers

IN Gresham, Wm. F.

PA E. I. du Pont de Nemours &amp; Co.

DT Patent

LA Unavailable

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 2397602 19460402 US &lt;&lt;

AB The polymers are obtained by the ester interchange of hydroxy-substituted 1,3-dioxolane or polyglycol formals with the esters of organic acids. A mixture of 524 g. dimethoxyethyl adipate, 272 g. (HOCH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>CH<sub>2</sub> (I), 3.5 g. litharge, and 3.5 g. ZnO was heated at 125-50° under 52 mm. pressure. Under these conditions 153.5 g. CH<sub>3</sub>OCH<sub>2</sub>CH<sub>2</sub>OH produced by the ester exchange was distilled out of the reaction mixture at 55°. The polyester product was treated with 18 g. water and with CO<sub>2</sub> to precipitate the catalysts as carbonates. The mixture was treated with decolorizing C, filtered, and the filtrate freed of water and unchanged formal. A residue of 600 g. of colorless viscous liquid was obtained which dissolved cellulose nitrate and chlorinated rubber and had the following phys. properties: OH number 137.0, saponification number 493.6, nD<sub>25</sub> 1.4555, and d<sub>25</sub> 1.1397. The reaction between I and

$[(CH_3)_2CHCH_2OCOCH_2O]_2CH_2$  gave a colorless viscous liquid, OH number 313.5, saponification number 252.7, d<sub>25</sub> 1.205, nD<sub>25</sub> 1.4598. Methyl methacrylate and a polyglycol formal (OH number 51.6) gave a colorless viscous liquid which on treatment with Bz2O<sub>2</sub> gave a colorless solid. A solid laurate ester was obtained from ester interchange between methyl laurate and  $CH_2(OCH_2CH_2OCH_2OCH_2CH_2OH)_2$  using MeONa as catalyst and heating 2 hrs. at 90° and 2 mm. pressure. When the reaction of Me stearate and polyglycol formal (mol. weight 1030) was carried out similarly but at 100-20° a solid stearate ester m. 41-2° was obtained. Extraction with hot C<sub>6</sub>H<sub>12</sub> gave a solid, m. 45-6°, which was completely miscible in water. The water-soluble portion had OH number 6.3, ester number 28, and mol. weight 1410. It exhibited excellent foaming properties. Ethyl fumarate and I gave a yellow mobile liquid which on treatment with Bz2O<sub>2</sub> gave a glass-like polymer. Coconut oil and polyglycol formal (mol. weight 353) gave a product which after extraction with n-C<sub>6</sub>H<sub>14</sub> produced a residue of light brown liquid which gave an excellent foam with water. A solid laurate ester, m. 44-7° soluble in water, was prepared from ethylene polyglycol formal (OH number 58) and methyl laurate in the presence of MeONa. The esters and polymers are all nonpolar surface-acting agents.

CC 27 (Fats, Fatty Oils, Waxes, and Detergents)

IT 109-86-4, Ethanol, 2-methoxy- 2565-36-8, Ethanol,

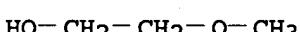
2,2'-methylenedioxydi-, ester polymers 854751-31-8, Methane, bis[2-(2-hydroxyethoxymethoxy)ethoxy]-, ester polymers (preparation of)

IT 109-86-4, Ethanol, 2-methoxy- 2565-36-8, Ethanol,

2,2'-methylenedioxydi-, ester polymers 854751-31-8, Methane, bis[2-(2-hydroxyethoxymethoxy)ethoxy]-, ester polymers (preparation of)

RN 109-86-4 HCPLUS

CN Ethanol, 2-methoxy- (8CI, 9CI) (CA INDEX NAME)



RN 2565-36-8 HCPLUS

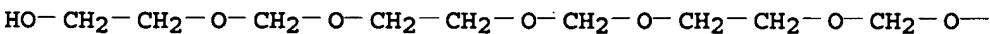
CN Ethanol, 2,2'-[methylenebis(oxy)]bis- (9CI) (CA INDEX NAME)



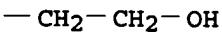
RN 854751-31-8 HCPLUS

CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



PAGE 1-B



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